# PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
Stylesheet Version v1.2

EPAS ID: PAT6000223

| | |
|---|---|
| **SUBMISSION TYPE:** | NEW ASSIGNMENT |
| **NATURE OF CONVEYANCE:** | CORRECTION OF APPLICATION NUMBER OF RECORDED COVER SHEET AT REEL/FRAME 051910/0689 |

**CONVEYING PARTY DATA**

| Name | Execution Date |
|---|---|
| KONINKLIJKE PHILIPS N.V. | 03/28/2019 |

**RECEIVING PARTY DATA**

| | |
|---|---|
| **Name:** | PHILIPS PHOTONICS GMBH |
| **Street Address:** | LISE-MEITNER-STRASSE13 |
| **City:** | ULM |
| **State/Country:** | GERMANY |
| **Postal Code:** | 89081 |

**PROPERTY NUMBERS Total: 1**

| Property Type | Number |
|---|---|
| **Application Number:** | 16086046 |

**CORRESPONDENCE DATA**

**Fax Number:** (312)616-5700

***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:** 3126165600
**Email:** assignments@leydig.com
**Correspondent Name:** LEYDIG, VOIT & MAYER, LTD.
**Address Line 1:** TWO PRUDENTIAL PLAZA, SUITE 4900
**Address Line 2:** 180 NORTH STETSON AVENUE
**Address Line 4:** CHICAGO, ILLINOIS 606016731

| | |
|---|---|
| **ATTORNEY DOCKET NUMBER:** | 817065 |
| **NAME OF SUBMITTER:** | JAMES C. SIGNOR |
| **SIGNATURE:** | /James C. Signor/ |
| **DATE SIGNED:** | 03/06/2020 |

**Total Attachments: 29**
source=817065_KoninklijketoPhilipsPhotonicsAssignment#page1.tif
source=817065_KoninklijketoPhilipsPhotonicsAssignment#page2.tif
source=817065_KoninklijketoPhilipsPhotonicsAssignment#page3.tif
source=817065_KoninklijketoPhilipsPhotonicsAssignment#page4.tif

source=817065_KoninklijketoPhilipsPhotonicsAssignment#page5.tif
source=817065_KoninklijketoPhilipsPhotonicsAssignment#page6.tif
source=817065_KoninklijketoPhilipsPhotonicsAssignment#page7.tif
source=817065_KoninklijketoPhilipsPhotonicsAssignment#page8.tif
source=817065_KoninklijketoPhilipsPhotonicsAssignment#page9.tif
source=817065_KoninklijketoPhilipsPhotonicsAssignment#page10.tif
source=817065_KoninklijketoPhilipsPhotonicsAssignment#page11.tif
source=817065_KoninklijketoPhilipsPhotonicsAssignment#page12.tif
source=817065_KoninklijketoPhilipsPhotonicsAssignment#page13.tif
source=817065_KoninklijketoPhilipsPhotonicsAssignment#page14.tif
source=817065_KoninklijketoPhilipsPhotonicsAssignment#page15.tif
source=817065_KoninklijketoPhilipsPhotonicsAssignment#page16.tif
source=817065_KoninklijketoPhilipsPhotonicsAssignment#page17.tif
source=817065_KoninklijketoPhilipsPhotonicsAssignment#page18.tif
source=817065_KoninklijketoPhilipsPhotonicsAssignment#page19.tif
source=817065_KoninklijketoPhilipsPhotonicsAssignment#page20.tif
source=817065_KoninklijketoPhilipsPhotonicsAssignment#page21.tif
source=817065_KoninklijketoPhilipsPhotonicsAssignment#page22.tif
source=817065_KoninklijketoPhilipsPhotonicsAssignment#page23.tif
source=817065_KoninklijketoPhilipsPhotonicsAssignment#page24.tif
source=817065_KoninklijketoPhilipsPhotonicsAssignment#page25.tif
source=817065_KoninklijketoPhilipsPhotonicsAssignment#page26.tif
source=817065_KoninklijketoPhilipsPhotonicsAssignment#page27.tif
source=817065_ConfirmationCotoCoAssignmentRecordation#page1.tif
source=817065_ConfirmationCotoCoAssignmentRecordation#page2.tif

United States Patent and Trademark Office



*Electronic Patent Assignment System*

# Confirmation Receipt

**Your assignment has been received by the USPTO.**
**The coversheet of the assignment is displayed below:**

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
Stylesheet Version v1.2

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

**CONVEYING PARTY DATA**

| Name | Execution Date |
|---|---|
| KONINKLIJKE PHILIPS N.V. | 03/28/2019 |

**RECEIVING PARTY DATA**

| | |
|---|---|
| **Name:** | PHILIPS PHOTONICS GMBH |
| **Street Address:** | LISE-MEITNER-STRASSE 13 |
| **City:** | ULM |
| **State/Country:** | GERMANY |
| **Postal Code:** | 89081 |

**PROPERTY NUMBERS Total: 1**

| Property Type | Number |
|---|---|
| **Application Number:** | 16086146 |

**CORRESPONDENCE DATA**

| | |
|---|---|
| **Fax Number:** | (312)616-5700 |
| **Phone:** | 3126165600 |

**Email:** assignments@leydig.com

***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.***

**Correspondent Name:** LEYDIG, VOIT & MAYER, LTD.
**Address Line 1:** TWO PRUDENTIAL PLAZA, SUITE 4900
**Address Line 2:** 180 NORTH STETSON AVENUE
**Address Line 4:** CHICAGO, ILLINOIS 606016731

| | |
|---|---|
| **ATTORNEY DOCKET NUMBER:** | 817065 |
| **NAME OF SUBMITTER:** | JAMES C. SIGNOR |
| **Signature:** | /James C. Signor/ |
| **Date:** | 02/12/2020 |

**Total Attachments: 27**
source=817065_KoninklijketoPhilipsPhotonicsAssignment#page1.tif
source=817065_KoninklijketoPhilipsPhotonicsAssignment#page2.tif
source=817065_KoninklijketoPhilipsPhotonicsAssignment#page3.tif
source=817065_KoninklijketoPhilipsPhotonicsAssignment#page4.tif
source=817065_KoninklijketoPhilipsPhotonicsAssignment#page5.tif
source=817065_KoninklijketoPhilipsPhotonicsAssignment#page6.tif
source=817065_KoninklijketoPhilipsPhotonicsAssignment#page7.tif
source=817065_KoninklijketoPhilipsPhotonicsAssignment#page8.tif
source=817065_KoninklijketoPhilipsPhotonicsAssignment#page9.tif
source=817065_KoninklijketoPhilipsPhotonicsAssignment#page10.tif
source=817065_KoninklijketoPhilipsPhotonicsAssignment#page11.tif
source=817065_KoninklijketoPhilipsPhotonicsAssignment#page12.tif
source=817065_KoninklijketoPhilipsPhotonicsAssignment#page13.tif
source=817065_KoninklijketoPhilipsPhotonicsAssignment#page14.tif
source=817065_KoninklijketoPhilipsPhotonicsAssignment#page15.tif
source=817065_KoninklijketoPhilipsPhotonicsAssignment#page16.tif
source=817065_KoninklijketoPhilipsPhotonicsAssignment#page17.tif
source=817065_KoninklijketoPhilipsPhotonicsAssignment#page18.tif
source=817065_KoninklijketoPhilipsPhotonicsAssignment#page19.tif
source=817065_KoninklijketoPhilipsPhotonicsAssignment#page20.tif
source=817065_KoninklijketoPhilipsPhotonicsAssignment#page21.tif
source=817065_KoninklijketoPhilipsPhotonicsAssignment#page22.tif
source=817065_KoninklijketoPhilipsPhotonicsAssignment#page23.tif
source=817065_KoninklijketoPhilipsPhotonicsAssignment#page24.tif
source=817065_KoninklijketoPhilipsPhotonicsAssignment#page25.tif
source=817065_KoninklijketoPhilipsPhotonicsAssignment#page26.tif
source=817065_KoninklijketoPhilipsPhotonicsAssignment#page27.tif

**RECEIPT INFORMATION**

**EPAS ID:** PAT5958814
**Receipt Date:** 02/12/2020

Return to home page

| .HOME | INDEX| SEARCH | eBUSINESS | CONTACT US | PRIVACY STATEMENT

EXECUTION COPY

# INTELLECTUAL PROPERTY TRANSFER AND LICENSE AGREEMENT

THIS INTELLECTUAL PROPERTY TRANSFER AND LICENSE AGREEMENT IS MADE ON 28 MARCH 2019 BY AND BETWEEN:

(1) Koninklijke Philips N.V., having its registered office at High Tech Campus 5, Eindhoven, the Netherlands ("Seller"), and

(2) Philips Photonics GmbH, having its registered office at Lise-Meitner-Strasse 13, 89081 Ulm, Germany ("Company");

Seller and Company hereinafter individually referred to as a "Party", and collectively as the "Parties",

WHEREAS:

Seller and TRUMPF International Beteiligungs-GmbH have entered into a sale and purchase Agreement dated 14 December 2018 ("the Principal Agreement") for the sale and purchase of the Business (as defined in the Principal Agreement);

In connection with the Principal Agreement, Seller and Company wish to confirm their agreement concerning the assignment and licensing of intellectual property rights whereby Seller will: (i) assign, or cause its Affiliates to assign, certain intellectual property rights related to the Business, and (ii) grant, or cause its Affiliates to grant, a license under certain intellectual property rights related to the Business.

IT IS HEREBY AGREED AS FOLLOWS:

## 1. Definitions

When used in this Intellectual Property Transfer and License Agreement ("Agreement"), the following terms shall have the meanings set forth below:

[redacted]

[redacted]

[redacted]

"Patent(s)" shall mean all patents, utility models, and all applications for such rights, and undisclosed inventions (as well as all patents and patent applications that may issue therefrom), as well as any divisionals, re-issues, renewals, re-examinations, continuations, continuations-in-part and foreign counterparts of any of the foregoing;

[redacted]

"Transfer Patents" shall mean any Patent listed in Annex A-1 and Annex A-2 to this Agreement, including any Patent on invention disclosures listed in Annex A-3 to this Agreement;

[redacted]

Any capitalized term used in this Agreement but not defined shall have the same meaning as ascribed thereto in the Principal Agreement.

**2. Assignment of Transfer Patents**

2.1 Upon Completion in accordance with the Principal Agreement and subject to the provisions of this Clause 2, Seller hereby assigns and agrees to cause its relevant Affiliates to assign to Company the Transfer Patents (in case of Patents solely owned by Seller) respectively Seller's share of the Transfer Patents (in case of Patents which are owned jointly by Seller and any third party) [redacted]

2.2 Company shall be responsible for the recordal of the assignment and bear all costs related to the registration of the assignment of the Transfer Patents. Seller shall sign and execute all such documents and do all such things as are necessary for the assignment of the Transfer Patents respectively Seller's share of the Transfer Patents to Company under this Agreement.

2.3 [redacted]

As from the Completion Date, Company may at its sole discretion end the prosecution, maintenance and other handling of the Transfer Patents.

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

EXECUTION COPY

15 Execution; Delivery

The Parties consent to execution of this Agreement by means of scanned signature copies in portable document format (pdf) and that such signatures placed by the parties on different copies of the signature page(s) shall be deemed to have been executed on one and the same page. The Parties agree not to challenge the validity or enforceability of this Agreement based on either Party's use of such scanned signatures. Delivery of an executed counterpart of a signature page of this Agreement in a non-modifiable electronic copy (e.g., in pdf format) via e-mail is deemed as effective as delivery of an originally executed counterpart of this Agreement.

AS WITNESS, the Parties have caused this Agreement to be signed by their duly authorized representatives on the date first written above.

Koninklijke Philips N.V.

(signature)

Authorized Representative

Philips Photonics GmbH

(signature)

Authorized Representative

ANNEXES

Annex A

Annex A-1 Transfer Patents

Annex A-2 Transfer Patents

[redacted]

| Family / Internal file | internal file number | Title | Priority date | Country code | Application number | Publication number | Grant number | Workflow status |
|---|---|---|---|---|---|---|---|---|
| 2000PF01141 | 2000P01141WOCN | OPTICAL MOUSE USING THE SELF-MIXING EFFECT IN A DIODE LASER | 06.11.2000 | CN | 01805124.5 | CN 1411503 A | 01805124.5 | National Procedure - Granted |
| 2000PF01141 | 2000P01141WOSG | OPTICAL MOUSE USING THE SELF-MIXING EFFECT IN A DIODE LASER | 06.11.2000 | SG | 200204056.2 | | 90647 | National Procedure - Granted |
| 2000PF01141 | 2000P01141WEGB | OPTICAL MOUSE USING THE SELF-MIXING EFFECT IN A DIODE LASER | 06.11.2000 | GB | 01992975.2 | | 1334460 | National Procedure - Granted after Opposition Period |
| 2000PF01141 | 2000P01141 US | OPTICAL MOUSE USING THE SELF-MIXING EFFECT IN A DIODE LASER | 06.11.2000 | US | 09/992709 | US 20020109857 A1 | 6707027 | National Procedure - Granted |
| 2000PF01141 | 2000P01141 TW | OPTICAL MOUSE USING THE SELF-MIXING EFFECT IN A DIODE LASER | 06.11.2000 | TW | 090127765 | | NI-157909 | National Procedure - Granted |
| 2000PF01141 | 2000P01141WEDE | OPTICAL MOUSE USING THE SELF-MIXING EFFECT IN A DIODE LASER | 06.11.2000 | DE | 01992975.5 | | 60141714.6 | National Procedure - Granted after Opposition Period |
| 2000PF01141 | 2000P01141WOKR | OPTICAL MOUSE USING THE SELF-MIXING EFFECT IN A DIODE LASER | 06.11.2000 | KR | 10-2002-7008729 | 10-2002-0068925 | 10-0813428 | National Procedure - Granted |
| 2000PF01141 | 2000P01141WEFR | OPTICAL MOUSE USING THE SELF-MIXING EFFECT IN A DIODE LASER | 06.11.2000 | FR | 01992975.2 | | 1334460 | National Procedure - Granted after Opposition Period |
| 2000PF01141 | 2000P01141WOJP | OPTICAL MOUSE USING THE SELF-MIXING EFFECT IN A DIODE LASER | 06.11.2000 | JP | 02-540002 | 2004/515552-A | 4087247 | National Procedure - Granted |
| 2000PF02305 | 2000P02305 US | VERTICAL CAVITY SURFACE EMITTING LASER WITH REDUCED PARASITIC CAPACITANCE | 02.11.2000 | US | 09/704345 | | 6570905 | National Procedure - Granted |
| 2000PF02306 | 2000P02306 US | OPTOELECTRONIC DEVICE HAVING A HIGHLY CONDUCTING CARRIER TUNNELING CURRENT APERTURE | 02.11.2000 | US | 09/706345 | | 6548835 | National Procedure - Granted |
| 2000PF02306 | 2000P02306WEGB | OPTOELECTRONIC DEVICE HAVING A HIGHLY CONDUCTING CARRIER TUNNELING CURRENT APERTURE | 02.11.2000 | GB | 01978728.2 | | 1338245 | National Procedure - Granted after Opposition Period |
| 2000PF02306 | 2000P02306WOCN | OPTOELECTRONIC DEVICE HAVING A HIGHLY CONDUCTING CARRIER TUNNELING CURRENT APERTURE | 02.11.2000 | CN | 01820106.7 | CN 1479960 A | 01820106.7 | National Procedure - Granted |
| 2000PF02306 | 2000P02306WEDE | OPTOELECTRONIC DEVICE HAVING A HIGHLY CONDUCTING CARRIER TUNNELING CURRENT APERTURE | 02.11.2000 | DE | 01978728.2 | | 60126310.6 | National Procedure - Granted after Opposition Period |
| 2000PF02306 | 2000P02306WEFR | OPTOELECTRONIC DEVICE HAVING A HIGHLY CONDUCTING CARRIER TUNNELING CURRENT APERTURE | 02.11.2000 | FR | 01978728.2 | | 1338245 | National Procedure - Granted after Opposition Period |
| 2003PF03058 | 2003P03058EPFR | POLARIZATION CONTROL OF VERTICAL DIODE LASERS BY MONOLITHICALLY INTEGRATED SURFACE GRATING | 18.11.2003 | FR | 04026558.1 | EP 1533876 A | 1533876 | National Procedure - Granted after Opposition Period |
| 2003PF03058 | 2003P03058EPDE | POLARIZATION CONTROL OF VERTICAL DIODE LASERS BY MONOLITHICALLY INTEGRATED SURFACE GRATING | 18.11.2003 | DE | 04026558.1 | EP 1533876 A | 50 2004 004 267.2 | National Procedure - Granted after Opposition Period |
| 2003PF03058 | 2003P03058EPGB | POLARIZATION CONTROL OF VERTICAL DIODE LASERS BY MONOLITHICALLY INTEGRATED SURFACE GRATING | 18.11.2003 | GB | 04026558.1 | EP 1533876 A | 1533876 | National Procedure - Granted after Opposition Period |
| 2003PF03058 | 2003P03058 US | POLARIZATION CONTROL OF VERTICAL DIODE LASERS BY MONOLITHICALLY INTEGRATED SURFACE GRATING | 18.11.2003 | US | 10/991883 | 2005/0185340-A | 7313527 | National Procedure - Granted |
| 2004PF00308 | 2004P00308WOKR | IMPROVED FOCUS FOR LASER BEETLE | 09.02.2004 | KR | 10-2006-7015880 | | 10-1160880 | National Procedure - Granted |
| 2004PF00308 | 2004P00308WEGB | IMPROVED FOCUS FOR LASER BEETLE | 09.02.2004 | GB | 05702915.8 | EP 1716475 | 1716475 | National Procedure - Granted after Opposition Period |
| 2004PF00308 | 2004P00308WOJP | IMPROVED FOCUS FOR LASER BEETLE | 09.02.2004 | JP | 2006-551899 | | 4705047 | National Procedure - Granted |
| 2004PF00308 | 2004P00308WEFR | IMPROVED FOCUS FOR LASER BEETLE | 05.02.2004 | FR | 05702915.9 | EP 1716476 | 1716476 | National Procedure - Granted after Opposition Period |
| 2004PF00308 | 2004P00308WOCN | IMPROVED FOCUS FOR LASER BEETLE | 05.02.2004 | CN | 200580012271.8 | CN 1947085 A | 200580012271.8 | National Procedure - Granted |
| 2004PF00308 | 2004P00308WOUS | IMPROVED FOCUS FOR LASER BEETLE | 08.02.2004 | US | 10/597701 | US 20070184205 A1 | 7439484 | National Procedure - Granted |
| 2004PF00308 | 2004P00308WEDE | IMPROVED FOCUS FOR LASER BEETLE | 08.02.2004 | DE | 05702915.9 | EP 1716476 | 602005046582.0 | National Procedure - Granted after Opposition Period |
| 2004PF00308 | 2004P00308WETR | IMPROVED FOCUS FOR LASER BEETLE | 09.02.2004 | TR | 05702915.9 | EP 1716476 | 1716476 | National Procedure - Granted after Opposition Period |
| 2004PF00895 | 2004P00895WEFR | LASER BEETLE WITH TOTAL INTERNAL REFLECTION | 29.04.2004 | FR | 05731771.1 | EP 1745351 A | 1745351 | National Procedure - Granted after Opposition Period |
| 2004PF00895 | 2004P00895WEGB | LASER BEETLE WITH TOTAL INTERNAL REFLECTION | 29.04.2004 | GB | 05731771.1 | EP 1745351 A | 1745351 | National Procedure - Granted after Opposition Period |
| 2004PF00895 | 2004P00895WOKR | LASER BEETLE WITH TOTAL INTERNAL REFLECTION | 29.04.2004 | KR | 10-2006-7022144 | | 10-1123182 | National Procedure - Granted |
| 2004PF00895 | 2004P00895WEDE | LASER BEETLE WITH TOTAL INTERNAL REFLECTION | 29.04.2004 | DE | 05731771.2 | EP 1745351 A | 602005025880.1 | National Procedure - Granted after Opposition Period |
| 2004PF00895 | 2004P00895WOCN | LASER BEETLE WITH TOTAL INTERNAL REFLECTION | 29.04.2004 | CN | 200580013637.2 | CN 1981258 A | 200580013637.2 | National Procedure - Granted |
| 2004PF00895 | 2004P00895WOJP | LASER BEETLE WITH TOTAL INTERNAL REFLECTION | 29.04.2004 | JP | 07-510219 | 07-535065 | 5108505 | National Procedure - Granted |
| 2005PF02271 | 2005P02271WOUS | 2D and 3D detection with laser self-mixing device. | 30.08.2005 | US | 11/064640 | US 20090222201 A1 | 7894402 | National Procedure - Granted |
| 2005PF02271 | 2005P02271WE | 2D and 3D detection with laser self-mixing device. | 30.08.2005 | | 06795755.7 | EP 1927043 A | 1927043 | EPC Procedure - Granted |
| 2005PF02271 | 2005P02271WEDE | 2D and 3D detection with laser self-mixing device. | 30.08.2005 | DE | 06795759.7 | EP 1927043 A | 60 2006 066 673.5 | National Procedure - Granted |
| 2005PF02271 | 2005P02271 TW | 2D and 3D detection with laser self-mixing device. | 30.08.2005 | TW | 095131587 | 200717286-A | I408571 | National Procedure - Granted |
| 2005PF02271 | 2005P02271WEFR | 2D and 3D detection with laser self-mixing device. | 30.08.2005 | FR | 06795759.7 | EP 1927043 A | 1927043 | National Procedure - Granted |
| 2005PF02271 | 2005P02271WEGB | 2D and 3D detection with laser self-mixing device. | 30.08.2005 | GB | 06795759.7 | EP 1927043 A | 1927043 | National Procedure - Granted |
| 2005PF02271 | 2005P02271WOKR | 2D and 3D detection with laser self-mixing device. | 30.08.2005 | KR | 10-2008-7007432 | | 10-1241000 | National Procedure - Granted |
| 2005PF02271 | 2005P02271WOJP | 2D and 3D detection with laser self-mixing device. | 30.08.2005 | JP | 08-528612 | | 5611499 | National Procedure - Granted |
| 2005PF02271 | 2005P02271WOCN | 2D and 3D detection with laser self-mixing device. | 30.08.2005 | CN | 200680031842.7 | CN 101305337 A | 200680031842.7 | National Procedure - Granted |
| 2005PF02272 | 2005P02272WEFR | LaserBeetle suitable for an enlarged range of speeds | 30.08.2005 | FR | 06795772.0 | EP 1927044 A | 1927044 | National Procedure - Granted |
| 2005PF02272 | 2005P02272WOJP | LaserBeetle suitable for an enlarged range of speeds | 30.08.2005 | JP | 08-528617 | | 5320066 | National Procedure - Granted |
| 2005PF02272 | 2005P02272WOKR | LaserBeetle suitable for an enlarged range of speeds | 30.08.2005 | KR | 10-2008-7007468 | | 10-1303371 | National Procedure - Granted |
| 2005PF02272 | 2005P02272WE | LaserBeetle suitable for an enlarged range of speeds | 30.08.2005 | | 06795772.0 | EP 1927044 A | 1927044 | EPC Procedure - Granted. |
| 2005PF02272 | 2005P02272WOUS | LaserBeetle suitable for an enlarged range of speeds | 30.08.2005 | US | 12/064642 | US 20080225300 A1 | 7889353 | National Procedure - Granted |
| 2005PF02272 | 2005P02272 TW | LaserBeetle suitable for an enlarged range of speeds | 30.08.2005 | TW | 095131250 | 200729024 | I421750 | National Procedure - Granted |
| 2005PF02272 | 2005P02272WOCN | LaserBeetle suitable for an enlarged range of speeds | 30.08.2005 | CN | 200680031865.9 | CN 101310247 A | 200680031865.9 | National Procedure - Granted |
| 2005PF02272 | 2005P02272WEGB | LaserBeetle suitable for an enlarged range of speeds | 30.08.2005 | GB | 06795772.0 | EP 1927044 A | 1927044 | National Procedure - Granted |
| 2005PF02272 | 2005P02272WEDE | LaserBeetle suitable for an enlarged range of speeds | 30.08.2005 | DE | 06795772.0 | EP 1927044 A | 60 2006 056 569.0 | National Procedure - Granted |
| 2005PF02712 | 2005P02712WOCN | Non-coherent laser self-mixing device | 20.12.2005 | CN | 200680048242.3 | CN 101344421 A | 200680048242.3 | National Procedure - Granted |
| 2005PF02712 | 2005P02712WEFR | Non-coherent laser self-mixing device | 20.12.2005 | FR | 06842636.0 | EP 1966627 A | 1966627 | National Procedure - Granted after Opposition Period |
| 2005PF02712 | 2005P02712 TW | Non-coherent laser self-mixing device | 20.12.2005 | TW | 095147152 | 200740056-A | I401460 | National Procedure - Granted |
| 2005PF02712 | 2005P02712WOKR | Non-coherent laser self-mixing device | 20.12.2005 | KR | 10-2008-7017569 | | 10-1261008 | National Procedure - Granted |
| 2005PF02712 | 2005P02712WEGB | Non-coherent laser self-mixing device | 20.12.2005 | GB | 06842636.0 | EP 1966627 A | 1966627 | National Procedure - Granted after Opposition Period |
| 2005PF02712 | 2005P02712WOUS | Non-coherent laser self-mixing device | 20.12.2005 | US | 12/097352 | US 20080303458 A1 | 7920249 | National Procedure - Granted |
| 2005PF02712 | 2005P02712WEDE | Non-coherent laser self-mixing device | 20.12.2005 | DE | 06842636.0 | EP 1966627 A | 60 2006 050 445.4 | National Procedure - Granted after Opposition Period |
| 2006PF00014 | 2006P00014WOJP | Laserbeetle current source supplying bursts of pulses. | 03.10.2006 | JP | 2008-530954 | | 5351028 | National Procedure - Granted |
| 2006PF00014 | 2006P00014WOUS | Laserbeetle current source supplying bursts of pulses. | 03.10.2006 | US | 12/444050 | US 20100098035 A1 | 8442082 | National Procedure - Granted |
| 2006PF00014 | 2006P00014WEFR | Laserbeetle current source supplying bursts of pulses. | 03.10.2006 | FR | 06809479.6 | EP 2074495 A | 2074495 | National Procedure - Granted after Opposition Period |
| 2006PF00014 | 2006P00014 TW | Laserbeetle current source supplying bursts of pulses. | 03.10.2006 | TW | 095135828 | 200717855-A | I448266 | National Procedure - Granted |
| 2006PF00014 | 2006P00014WEGB | Laserbeetle current source supplying bursts of pulses. | 03.10.2006 | GB | 06809479.6 | EP 2074495 A | 2074495 | National Procedure - Granted after Opposition Period |
| 2006PF00014 | 2006P00014WEDE | Laserbeetle current source supplying bursts of pulses. | 03.10.2006 | DE | 06809479.6 | EP 2074495 A | 60 2006 046 202.6 | National Procedure - Granted after Opposition Period |
| 2006PF00014 | 2006P00014WETR | Laserbeetle current source supplying bursts of pulses. | 03.10.2006 | TR | 06809479.6 | EP 2074495 A | 2074495 | National Procedure - Granted after Opposition Period |
| 2006PF00014 | 2006P00014WOCN | Laserbeetle current source supplying bursts of pulses. | 03.10.2006 | CN | 200680056022.3 | CN 101517520 A | 200680056022.3 | National Procedure - Granted |
| 2006PF00014 | 2006P00014WOKR | Laserbeetle current source supplying bursts of pulses. | 03.10.2006 | KR | 10-2009-7009049 | | 10-1378308 | National Procedure - Granted |
| 2006PF02484 | 2006P02484WOUS | VCSEL arrangement for heating applications | 18.12.2006 | US | 12/518903 | US 20100230863 A1 | 8789021 | National Procedure - Granted |
| 2006PF02484 | 2006P02484WOCN | VCSEL arrangement for heating applications | 19.12.2006 | CN | 200780047105.0 | CN 101563185 A | 200780047105.0 | National Procedure - Granted |
| 2006PF02484 | 2006P02484WEDE | VCSEL arrangement for heating applications | 19.12.2006 | DE | 07859406.6 | EP 2094460 A | 602007035842.6 | National Procedure - Granted after Opposition Period |
| 2006PF02484 | 2006P02484WOJP | VCSEL arrangement for heating applications | 19.12.2006 | JP | 2009-542344 | | 5662012 | National Procedure - Granted |
| 2006PF02484 | 2006P02484WEFR | VCSEL arrangement for heating applications | 19.12.2006 | FR | 07859406.6 | EP 2094460 A | 2094460 | National Procedure - Granted after Opposition Period |
| 2006PF02484 | 2006P02484WEGB | VCSEL arrangement for heating applications | 18.12.2006 | GB | 07859406.6 | EP 2094460 A | 2094460 | National Procedure - Granted after Opposition Period |
| 2007PF01015 | 2007P01015WEFR | Increased Detection Range of a Self Mixing Interferometry Laser Sensor by Using an External Cavity | 07.05.2007 | FR | 08763056.2 | EP 2147488 A | 2147488 | National Procedure - Granted after Opposition Period |
| 2007PF01015 | 2007P01015 CN01 | Increased Detection Range of a Self Mixing Interferometry Laser Sensor by Using an External Cavity | 07.05.2007 | CN | | | | National Procedure - File Closed |
| 2007PF01015 | 2007P01015WEGB | Increased Detection Range of a Self Mixing Interferometry Laser Sensor by Using an External Cavity | 07.05.2007 | GB | 08763056.2 | EP 2147489 A | 2147489 | National Procedure - Granted after Opposition Period |
| 2007PF01015 | 2007P01015WOUS | Increased Detection Range of a Self Mixing Interferometry Laser Sensor by Using an External Cavity | 07.05.2007 | US | 12/599210 | US 20100134803 A1 | 9357476 | National Procedure - Granted |
| 2007PF01015 | 2007P01015 US | Increased Detection Range of a Self Mixing Interferometry Laser Sensor by Using an External Cavity | 07.05.2007 | US | 13/177258 | US 20110260785 A1 | | National Procedure |
| 2007PF01015 | 2007P01015 CN | Increased Detection Range of a Self Mixing Interferometry Laser Sensor by Using an External Cavity | 07.05.2007 | CN | 201310087470.6 | | 201310087470.6 | National Procedure - Granted |
| 2007PF01015 | 2007P01015WEDE | Increased Detection Range of a Self Mixing Interferometry Laser Sensor by Using an External Cavity | 07.05.2007 | DE | 08763056.2 | EP 2147489 A | 602008008263.6 | National Procedure - Granted after Opposition Period |



PATENT
REEL: 052114 FRAME: 0380

# Transfer Patent Rights (prepared for Trumpf)

## Annex A-1



| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 2007PF01015 | 2007P01015WOJP | Increased Detection Range of a Self Mixing Interferometry Laser Sensor by Using an External Cavity | 07.05.2007 JP | 2010-507029 | | 5885438 | National Procedure - Granted |
| 2007PF01219 | 2007P01219WOJP | Ultra-Low Cost Optical Sensor module. | 27.06.2007 JP | 10-514204 | | 5753506 | National Procedure - Granted |
| 2007PF01219 | 2007P01219WOCN | Ultra-Low Cost Optical Sensor module. | 27.06.2007 CN | 200880022022.5 | CN 101688748 A | 200880022022.5 | National Procedure - Granted |
| 2007PF01219 | 2007P01219WEGB | Ultra-Low Cost Optical Sensor module. | 27.06.2007 GB | 08775444.5 | EP 2171811 A | 2171811 | National Procedure - Granted after Opposition Period |
| 2007PF01219 | 2007P01219WETR | Ultra-Low Cost Optical Sensor module. | 27.06.2007 TR | 08775444.5 | EP 2171811 A | 2171811 | National Procedure - Granted after Opposition Period |
| 2007PF01219 | 2007P01219WOUS | Ultra-Low Cost Optical Sensor module. | 27.06.2007 US | 12/665124 | US 20100187449 A1 | 8378287 | National Procedure - Granted |
| 2007PF01219 | 2007P01219WEFR | Ultra-Low Cost Optical Sensor module. | 27.06.2007 FR | 08775444.5 | EP 2171811 A | 2171811 | National Procedure - Granted after Opposition Period |
| 2007PF01219 | 2007P01219WEDE | Ultra-Low Cost Optical Sensor module. | 27.06.2007 DE | 08775444.5 | EP 2171811 A | 602008036240.0 | National Procedure - Granted after Opposition Period |
| 2007PF01365 | 2007P01365WOKR | VCSEL and integrated phototransistor | 11.12.2007 KR | 10-2010-7015244 | | 10-1542729 | National Procedure - Granted |
| 2007PF01365 | 2007P01365WOJP | VCSEL and integrated phototransistor | 11.12.2007 JP | 2010-537579 | | 5451652 | National Procedure - Granted |
| 2007PF01365 | 2007P01365WOCN | VCSEL and integrated phototransistor | 11.12.2007 CN | 200880120392.8 | CN 101897089 A | 200880120392.8 | National Procedure - Granted |
| 2007PF01365 | 2007P01365 US | VCSEL and integrated phototransistor | 11.12.2007 US | 12/808494 | | 8755546 | National Procedure - Granted |
| 2007PF01365 | 2007P01365WEDE | VCSEL and integrated phototransistor | 11.12.2007 DE | 08860123.6 | EP 2218152 A | 602008007080.5 | National Procedure - Granted after Opposition Period |
| 2007PF01365 | 2007P01365 US01 | VCSEL and integrated phototransistor | 11.12.2007 US | 13/665472 | | 10164407 | National Procedure - Granted |
| 2007PF01365 | 2007P01365WEFR | VCSEL and integrated phototransistor | 11.12.2007 FR | 08860123.6 | EP 2218152 A | 2218152 | National Procedure - Granted after Opposition Period |
| 2007PF01365 | 2007P01365WEGB | VCSEL and integrated phototransistor | 11.12.2007 GB | 08860121.5 | EP 2218153 A | 2218153 | National Procedure - Granted after Opposition Period |
| 2008PF00536 | 2008P00536WOCN | VCSEL-integrated n-p-i-n Photodetectors | 09.05.2008 CN | 200980116760.6 | CN 102017332 A | 200980116760.6 | National Procedure - Granted |
| 2008PF00536 | 2008P00536WOUS | VCSEL-integrated n-p-i-n Photodetectors | 09.05.2008 US | 12/990798 | US 20110064110 A1 | 8467428 | National Procedure - Granted |
| 2008PF00536 | 2008P00536WEFR | VCSEL-integrated n-p-i-n Photodetectors | 09.05.2008 FR | 09742521.9 | EP 2277245 A | 2277245 | National Procedure - Granted after Opposition Period |
| 2008PF00536 | 2008P00536WEDE | VCSEL-integrated n-p-i-n Photodetectors | 09.05.2008 DE | 09742521.9 | EP 2277245 A | 60 2009 039 308.7 | National Procedure - Granted after Opposition Period |
| 2008PF00536 | 2008P00536WEGB | VCSEL-integrated n-p-i-n Photodetectors | 09.05.2008 GB | 09742521.9 | EP 2277245 A | 2277245 | National Procedure - Granted after Opposition Period |
| 2008PF00536 | 2008P00536WOJP | VCSEL-integrated n-p-i-n Photodetectors | 09.05.2008 JP | 2011-508022 | | 5734841 | National Procedure - Granted |
| 2008PF01012 | 2008P01012WEDE | VCSEL with integrated Photodiode and integrated heater for a wide range of operating temperatures | 17.09.2008 DE | 09787207.1 | EP 2327128 A | 602009014455.0 | National Procedure - Granted after Opposition Period |
| 2008PF01012 | 2008P01012WOCN | VCSEL with integrated Photodiode and integrated heater for a wide range of operating temperatures | 17.09.2008 CN | 200980136299.0 | CN 102160246 A | 200980136299.0 | National Procedure - Granted |
| 2008PF01012 | 2008P01012WEGB | VCSEL with integrated Photodiode and integrated heater for a wide range of operating temperatures | 17.09.2008 GB | 09787207.1 | EP 2327128 A | 2327128 | National Procedure - Granted after Opposition Period |
| 2008PF01012 | 2008P01012WOJP | VCSEL with integrated Photodiode and integrated heater for a wide range of operating temperatures | 17.09.2008 JP | 2011-526624 | | 5616343 | National Procedure - Granted |
| 2008PF01012 | 2008P01012WEFR | VCSEL with integrated Photodiode and integrated heater for a wide range of operating temperatures | 17.09.2008 FR | 09787207.1 | EP 2327128 A | 2327128 | National Procedure - Granted after Opposition Period |
| 2008PF01012 | 2008P01012WOKR | VCSEL with integrated Photodiode and integrated heater for a wide range of operating temperatures | 17.09.2008 KR | 10-2011-7008729 | | 10-1659504 | National Procedure - Granted |
| 2008PF01012 | 2008P01012WOUS | VCSEL with integrated Photodiode and integrated heater for a wide range of operating temperatures | 17.09.2008 US | 13/119015 | US 20110164653 A1 | 8545719 | National Procedure - Granted |
| 2008PF01087 | 2008P01087WEGB | Improved Bottom Emitting VCSELs by Semiconductor-Dielectric-Metal Mirror on the Top (p-) Side | 14.10.2008 GB | 09787370.7 | EP 2347480 A | EP2347480 | National Procedure - Granted after Opposition Period |
| 2008PF01087 | 2008P01087WEFR | Improved Bottom Emitting VCSELs by Semiconductor-Dielectric-Metal Mirror on the Top (p-) Side | 14.10.2008 FR | 09787370.7 | EP 2347480 A | EP2347480 | National Procedure - Granted after Opposition Period |
| 2008PF01087 | 2008P01087WEDE | Improved Bottom Emitting VCSELs by Semiconductor-Dielectric-Metal Mirror on the Top (p-) Side | 14.10.2008 DE | 09787370.7 | EP 2347480 A | 60 2009 043 105.5 | National Procedure - Granted after Opposition Period |
| 2008PF01087 | 2008P01087WETR | Improved Bottom Emitting VCSELs by Semiconductor-Dielectric-Metal Mirror on the Top (p-) Side | 14.10.2008 TR | 09787370.7 | EP 2347480 A | EP2347480 | National Procedure - Granted after Opposition Period |
| 2008PF01087 | 2008P01087WOCN | Improved Bottom Emitting VCSELs by Semiconductor-Dielectric-Metal Mirror on the Top (p-) Side | 14.10.2008 CN | 200980140700.6 | CN 102187534 A | 200980140700.6 | National Procedure - Granted |
| 2008PF01087 | 2008P01087WOUS | Improved Bottom Emitting VCSELs by Semiconductor-Dielectric-Metal Mirror on the Top (p-) Side | 14.10.2008 US | 13/123736 | US 20110188531 A1 | 8355417 | National Procedure - Granted |
| 2008PF01251 | 2008P01251WOCN | Mode improvement and stabilization of large area VCSEL | 10.12.2008 CN | 200980149700.4 | CN 102246367 A | 200980149700.4 | National Procedure - Granted |
| 2008PF01251 | 2008P01251WEDE | Mode improvement and stabilization of large area VCSEL | 10.12.2008 DE | 09774975.8 | EP 2377211 A | 602009033406.6 | National Procedure - Granted after Opposition Period |
| 2008PF01251 | 2008P01251WEGB | Mode improvement and stabilization of large area VCSEL | 10.12.2008 GB | 09774975.8 | EP 2377211 A | 2377211 | National Procedure - Granted after Opposition Period |
| 2008PF01251 | 2008P01251WEFR | Mode improvement and stabilization of large area VCSEL | 10.12.2008 FR | 09774975.8 | EP 2377211 A | 2377211 | National Procedure - Granted after Opposition Period |
| 2008PF01251 | 2008P01251WOJP | Mode improvement and stabilization of large area VCSEL | 10.12.2008 JP | 2011-540282 | | 5744749 | National Procedure - Granted |
| 2009PF00009 | 2009P00009WEFR | High accuracy self-mixing displacement sensor with a Frequency-Locked Loop | 31.03.2009 FR | 10712576.7 | EP 2414916 A | 2414916 | National Procedure - Granted after Opposition Period |
| 2009PF00009 | 2009P00009WOJP | High accuracy self-mixing displacement sensor with a Frequency-Locked Loop | 31.03.2009 JP | 2012-502844 | | 5735482 | National Procedure - Granted |
| 2009PF00009 | 2009P00009WORU | High accuracy self-mixing displacement sensor with a Frequency-Locked Loop | 31.03.2009 RU | 2011143731 | RU2011143731 A | 2530357 | National Procedure - Granted |
| 2009PF00009 | 2009P00009WEGB | High accuracy self-mixing displacement sensor with a Frequency-Locked Loop | 31.03.2009 GB | 10712576.7 | EP 2414916 A | 2414916 | National Procedure - Granted |
| 2009PF00009 | 2009P00009WOKR | High accuracy self-mixing displacement sensor with a Frequency-Locked Loop | 31.03.2009 KR | 10-2011-7025784 | | 10-1714765 | National Procedure - Granted after Opposition Period |
| 2009PF00009 | 2009P00009WETR | High accuracy self-mixing displacement sensor with a Frequency-Locked Loop | 31.03.2009 TR | 10712576.7 | EP 2414916 A | TR 2015 15311 T4 | National Procedure - Granted |
| 2009PF00009 | 2009P00009WOCN | High accuracy self-mixing displacement sensor with a Frequency-Locked Loop | 31.03.2009 CN | 201080014540.5 | CN 102378952 A | 201080014540.5 | National Procedure - Granted after Opposition Period |
| 2009PF00009 | 2009P00009WEDE | High accuracy self-mixing displacement sensor with a Frequency-Locked Loop | 31.03.2009 DE | 10712576.7 | EP 2414916 A | 60 2010 027 700.8 | National Procedure - Granted |
| 2009PF00009 | 2009P00009WOUS | High accuracy self-mixing displacement sensor with a Frequency-Locked Loop | 31.03.2009 US | 13/260584 | US 20120081553 A1 | 9144812 | National Procedure - Granted after Opposition Period |
| 2009PF00009 | 2009P00009WOBR | High accuracy self-mixing displacement sensor with a Frequency-Locked Loop | 31.03.2009 BR | PI 1007076-8 | PI1007076-0 | | National Procedure - Granted |
| 2009PF00009 | 2009P00009WOCA | High accuracy self-mixing displacement sensor with a Frequency-Locked Loop | 31.03.2009 CA | 2757163 | | 2757035 | National Procedure |
| 2009PF00009 | 2009P00009WOIN | High accuracy self-mixing displacement sensor with a Frequency-Locked Loop | 31.03.2009 IN | 7758/CHENP/2011 | | | National Procedure - Granted |
| 2009PF00117 | 2009P00117WEFR | Single output power stabilization for VCSELs using the photon-mixing dependent laser voltage | 25.02.2009 FR | 10708600.1 | EP 2401794 A | 2401794 | National Procedure |
| 2009PF00117 | 2009P00117WEDE | Single output power stabilization for VCSELs using the photon-mixing dependent laser voltage | 25.02.2009 DE | 10708600.1 | EP 2401794 A | 602010002725.2 | National Procedure - Granted after Opposition Period |
| 2009PF00117 | 2009P00117WOKR | Single output power stabilization for VCSELs using the photon-mixing dependent laser voltage | 25.02.2009 KR | 10-2011-7022296 | | 10-1598556 | National Procedure - Granted after Opposition Period |
| 2009PF00117 | 2009P00117WOCN | Single output power stabilization for VCSELs using the photon-mixing dependent laser voltage | 25.02.2009 CN | 201080009335.4 | CN 102334231 A | 201080009335.4 | National Procedure - Granted |
| 2009PF00117 | 2009P00117WOJP | Single output power stabilization for VCSELs using the photon-mixing dependent laser voltage | 25.02.2009 JP | 2011-550682 | | 5658691 | National Procedure - Granted |
| 2009PF00117 | 2009P00117WEGB | Single output power stabilization for VCSELs using the photon-mixing dependent laser voltage | 25.02.2009 GB | 10708600.1 | EP 2401794 A | 2401794 | National Procedure - Granted |
| 2009PF00117 | 2009P00117WOUS | Single output power stabilization for VCSELs using the photon-mixing dependent laser voltage | 25.02.2009 US | 13/203051 | US 20120006400 A1 | 8611382 | National Procedure - Granted after Opposition Period |
| 2009PF00355 | 2009P00355WOUS | Pulsed laser for SNR improvement. | 17.08.2009 US | 13/390545 | US 20120178885 A1 | 8882234 | National Procedure - Granted |
| 2009PF00355 | 2009P00355WOKR | Pulsed laser for SNR improvement. | 17.08.2009 KR | 10-2012-7006510 | | 10-1651732 | National Procedure - Granted |
| 2009PF00355 | 2009P00355WOCN | Pulsed laser for SNR improvement. | 17.08.2009 CN | 201080036521.2 | CN 102549449 A | 201080036521.2 | National Procedure - Granted |
| 2009PF00355 | 2009P00355WOJP | Pulsed laser for SNR improvement. | 17.08.2009 JP | 2012-525232 | | 5752685 | National Procedure - Granted |
| 2009PF00355 | 2009P00355WETR | Pulsed laser for SNR improvement. | 17.08.2009 TR | 10749496.5 | EP 2467733 A | 2467733 | National Procedure - Granted |
| 2009PF00355 | 2009P00355WEFR | Pulsed laser for SNR improvement. | 17.08.2009 FR | 10749496.5 | EP 2467733 A | 2467733 | National Procedure - Granted after Opposition Period |
| 2009PF00355 | 2009P00355WEDE | Pulsed laser for SNR improvement. | 17.08.2009 DE | 10749496.5 | EP 2467733 A | 60 2010 028 258.5 | National Procedure - Granted after Opposition Period |
| 2009PF00355 | 2009P00355WEGB | Pulsed laser for SNR improvement. | 17.08.2009 GB | 10749496.5 | EP 2467733 A | 2467733 | National Procedure - Granted after Opposition Period |
| 2009PF00395 | 2009P00395WEDE | Monolithically integrated Distributed Photodetectors for VCSEL with Active Carrier Confinement | 10.08.2009 DE | 10747280.4 | EP 2465172 | | National Procedure - Preparation of Filing Documents |
| 2009PF00395 | 2009P00395WEGB | Monolithically integrated Distributed Photodetectors for VCSEL with Active Carrier Confinement | 10.08.2009 GB | 10747280.4 | EP 2465172 | | National Procedure - Preparation of Filing Documents |
| 2009PF00395 | 2009P00395WOKR | Monolithically integrated Distributed Photodetectors for VCSEL with Active Carrier Confinement | 10.08.2009 KR | 10-2012-7006848 | | 10-1701733 | National Procedure - Granted |
| 2009PF00395 | 2009P00395WEFR | Monolithically integrated Distributed Photodetectors for VCSEL with Active Carrier Confinement | 10.08.2009 FR | 10747280.4 | EP 2465172 | | National Procedure - Preparation of Filing Documents |
| 2009PF00395 | 2009P00395WE | Monolithically integrated Distributed Photodetectors for VCSEL with Active Carrier Confinement | 10.08.2009 | 10747280.4 | EP 2465172 | | EPC Procedure |
| 2009PF00395 | 2009P00395WOUS | Monolithically integrated Distributed Photodetectors for VCSEL with Active Carrier Confinement | 10.08.2009 US | 13/388213 | US-2012-0128029 A1 | 8457170 | National Procedure - Granted |
| 2009PF00395 | 2009P00395WOJP | Monolithically integrated Distributed Photodetectors for VCSEL with Active Carrier Confinement | 10.08.2009 JP | 2012-524313 | | 5026864 | National Procedure - Granted |
| 2009PF00395 | 2009P00395WOCN | Monolithically integrated Distributed Photodetectors for VCSEL with Active Carrier Confinement | 10.08.2009 CN | 201080035587.X | CN 102474072 A | 201080035587.7 | National Procedure - Granted |
| 2009PF01076 | 2009P01076WOUS | Beam-shaping of vertical-cavity surface-emitting lasers with angular-selective feedback | 20.08.2009 US | 13/391595 | US 20120147912 A1 | 9123342 | National Procedure - Granted |
| 2009PF01076 | 2009P01076WOKR | Beam-shaping of vertical-cavity surface-emitting lasers with angular-selective feedback | 20.08.2009 KR | 10-2012-7007044 | | 10-1731343 | National Procedure - Granted |
| 2009PF01076 | 2009P01076WEDE | Beam-shaping of vertical-cavity surface-emitting lasers with angular-selective feedback | 20.08.2009 DE | 10752426.6 | EP 2467910 A | 60 2010 056 502.2 | National Procedure - Granted |
| 2009PF01076 | 2009P01076WOJP | Beam-shaping of vertical-cavity surface-emitting lasers with angular-selective feedback | 20.08.2009 JP | 2012-525120 | | 5915151 | National Procedure - Granted |
| 2009PF01076 | 2009P01076WEGB | Beam-shaping of vertical-cavity surface-emitting lasers with angular-selective feedback | 20.08.2009 GB | 10752426.6 | EP 2467910 A | 2467910 | National Procedure - Granted |
| 2009PF01076 | 2009P01076WEFR | Beam-shaping of vertical-cavity surface-emitting lasers with angular-selective feedback | 20.08.2009 FR | 10752426.6 | EP 2467910 A | 2467910 | National Procedure - Granted |



PATENT
REEL: 052114 FRAME: 0381

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 2009PF01076 | 2009P01076WOCN | Beam-shaping of vertical-cavity surface-emitting lasers with angular-selective feedback | 20.08.2009 CN | 201080036797.0 | CN 102549858 A | 201080036797.0 | National Procedure - Granted |
| 2009PF01076 | 2009P01076WE | Beam-shaping of vertical-cavity surface-emitting lasers with angular-selective feedback | 20.08.2009 | 10752426.5 | EP 2467910 A | 2467910 | EPC Procedure - Granted |
| 2009PF01249 | 2009P01249WOCN | Ultra-flat low-cost self-mixing interference sensor with silicon wave guide structure | 23.10.2009 CN | 201080047707.8 | CN 102575925 A | 201080047707.8 | National Procedure - Granted |
| 2009PF01249 | 2009P01249WOUS | Ultra-flat low-cost self-mixing interference sensor with silicon wave guide structure | 23.10.2009 US | 13/500678 | US 20120200858 A1 | 9091747 | National Procedure - Granted |
| 2009PF01249 | 2009P01249WEGB | Ultra-flat low-cost self-mixing interference sensor with silicon wave guide structure | 23.10.2009 GB | 10782024.5 | EP 2491336 | 2491336 | National Procedure - Granted after Opposition Period |
| 2009PF01249 | 2009P01249WEFR | Ultra-flat low-cost self-mixing interference sensor with silicon wave guide structure | 23.10.2009 FR | 10782024.5 | EP 2491336 | 2491336 | National Procedure - Granted after Opposition Period |
| 2009PF01249 | 2009P01249WEDE | Ultra-flat low-cost self-mixing interference sensor with silicon wave guide structure | 23.10.2009 DE | 10782024.5 | EP 2491336 | 60 2010 009 542.5 | National Procedure - Granted after Opposition Period |
| 2009PF01249 | 2009P01249WOJP | Ultra-flat low-cost self-mixing interference sensor with silicon wave guide structure | 23.10.2009 JP | 2012-534811 | | 5805163 | National Procedure - Granted |
| 2009PF01800 | 2009P01800WOJP | VERTICAL CAVITY SURFACE EMITTING LASER ARRAY DEVICE WITH CONFIGURABLE INTENSITY DISTRIBUTION | 20.08.2009 JP | 2012-525239 | | 5894520 | National Procedure - Granted |
| 2009PF01800 | 2009P01800WOKR | VERTICAL CAVITY SURFACE EMITTING LASER ARRAY DEVICE WITH CONFIGURABLE INTENSITY DISTRIBUTION | 20.08.2009 KR | 10-2012-7007065 | | 10-1733422 | National Procedure - Granted |
| 2009PF01800 | 2009P01800WETR | VERTICAL CAVITY SURFACE EMITTING LASER ARRAY DEVICE WITH CONFIGURABLE INTENSITY DISTRIBUTION | 20.08.2009 TR | 10752427.6 | EP 2478602 A | 2478602 | National Procedure - Granted after Opposition Period |
| 2009PF01800 | 2009P01800WEFR | VERTICAL CAVITY SURFACE EMITTING LASER ARRAY DEVICE WITH CONFIGURABLE INTENSITY DISTRIBUTION | 20.08.2009 FR | 10752427.6 | EP 2478602 A | 2478602 | National Procedure - Granted after Opposition Period |
| 2009PF01800 | 2009P01800WEGB | VERTICAL CAVITY SURFACE EMITTING LASER ARRAY DEVICE WITH CONFIGURABLE INTENSITY DISTRIBUTION | 20.08.2009 GB | 10752427.6 | EP 2478602 A | 2478602 | National Procedure - Granted after Opposition Period |
| 2009PF01800 | 2009P01800WOUS | VERTICAL CAVITY SURFACE EMITTING LASER ARRAY DEVICE WITH CONFIGURABLE INTENSITY DISTRIBUTION | 20.08.2009 US | 13/391,805 | US 20120281293 A1 | 9048633 | National Procedure - Granted |
| 2009PF01800 | 2009P01800WOCN | VERTICAL CAVITY SURFACE EMITTING LASER ARRAY DEVICE WITH CONFIGURABLE INTENSITY DISTRIBUTION | 20.08.2009 CN | 201080036605.1 | CN 102742100 A | 201080036605.1 | National Procedure - Granted |
| 2009PF01800 | 2009P01800WEDE | VERTICAL CAVITY SURFACE EMITTING LASER ARRAY DEVICE WITH CONFIGURABLE INTENSITY DISTRIBUTION | 20.08.2009 DE | 10752427.6 | EP 2478602 A | 60 2010 020 903.2 | National Procedure - Granted after Opposition Period |
| 2010PF00107 | 2010P00107WOJP | PRINTING APPARATUS AND METHOD FOR CONTROLLING A PRINTING APPARATUS | 18.03.2010 JP | 2012-557649 | | 5544830 | National Procedure - Granted |
| 2010PF00107 | 2010P00107WOUS | PRINTING APPARATUS AND METHOD FOR CONTROLLING A PRINTING APPARATUS | 18.03.2010 US | 13/579722 | US 20130016875 A1 | 8573865 | National Procedure - Granted |
| 2010PF00107 | 2010P00107WETR | PRINTING APPARATUS AND METHOD FOR CONTROLLING A PRINTING APPARATUS | 18.03.2010 TR | 11713357.8 | EP 2547520 A | 2547520 | National Procedure - Granted after Opposition Period |
| 2010PF00107 | 2010P00107WEGB | PRINTING APPARATUS AND METHOD FOR CONTROLLING A PRINTING APPARATUS | 18.03.2010 GB | 11713357.8 | EP 2547520 A | 2547520 | National Procedure - Granted after Opposition Period |
| 2010PF00107 | 2010P00107WEDE | PRINTING APPARATUS AND METHOD FOR CONTROLLING A PRINTING APPARATUS | 18.03.2010 DE | 11713357.8 | EP 2547520 A | 60 2011 020 757.3 | National Procedure - Granted after Opposition Period |
| 2010PF00107 | 2010P00107WOCN | PRINTING APPARATUS AND METHOD FOR CONTROLLING A PRINTING APPARATUS | 18.03.2010 CN | 201180014562.6 | CN 102905905 A | 201180014562.6 | National Procedure - Granted |
| 2010PF00107 | 2010P00107WEFR | PRINTING APPARATUS AND METHOD FOR CONTROLLING A PRINTING APPARATUS | 18.03.2010 FR | 11713357.8 | EP 2547520 A | 2547520 | National Procedure - Granted after Opposition Period |
| 2010PF00859 | 2010P00859WE | OPTICAL ELEMENT FOR VERTICAL EXTERNAL-CAVITY SURFACE-EMITTING LASER | 05.11.2010 | 11787257.0 | EP 2636111 A | | EPC Procedure |
| 2010PF00859 | 2010P00859WOCN | OPTICAL ELEMENT FOR VERTICAL EXTERNAL-CAVITY SURFACE-EMITTING LASER | 05.11.2010 CN | 201180053163.0 | CN 103181040 A | 201180053163.0 | National Procedure - Granted |
| 2010PF00859 | 2010P00859WOUS | OPTICAL ELEMENT FOR VERTICAL EXTERNAL-CAVITY SURFACE-EMITTING LASER | 05.11.2010 US | 13/882958 | US 20130223466 A1 | 9112336 | National Procedure - Granted |
| 2011PF00156 | 2011P00156WOBR | VCSEL ARRAY WITH INCREASED EFFICIENCY | 09.03.2011 BR | BR 11 2013 022631 5 | BR 11 2013 022631-5 | | National Procedure |
| 2011PF00156 | 2011P00156WEFR | VCSEL ARRAY WITH INCREASED EFFICIENCY | 09.03.2011 FR | 12708970.4 | EP 2684263 A | 2684263 | National Procedure - Granted after Opposition Period |
| 2011PF00156 | 2011P00156WOIN | VCSEL ARRAY WITH INCREASED EFFICIENCY | 09.03.2011 IN | 7894/CHENP/2013 | | | National Procedure |
| 2011PF00156 | 2011P00156WOUS | VCSEL ARRAY WITH INCREASED EFFICIENCY | 09.03.2011 US | 14/003218 | US 20130343418 A1 | 8891569 | National Procedure - Granted |
| 2011PF00156 | 2011P00156WORU | VCSEL ARRAY WITH INCREASED EFFICIENCY | 09.03.2011 RU | 2013145082 | 2013145082 | 2587457 | National Procedure - Granted |
| 2011PF00156 | 2011P00156WOJP | VCSEL ARRAY WITH INCREASED EFFICIENCY | 09.03.2011 JP | 2013-557200 | | 5752634 | National Procedure - Granted |
| 2011PF00156 | 2011P00156WOCN | VCSEL ARRAY WITH INCREASED EFFICIENCY | 09.03.2011 CN | 201280012332.0 | CN 103403986 A | 201280012332.0 | National Procedure - Granted |
| 2011PF00156 | 2011P00156WEGB | VCSEL ARRAY WITH INCREASED EFFICIENCY | 09.03.2011 GB | 12708970.4 | EP 2684263 A | 2684263 | National Procedure - Granted after Opposition Period |
| 2011PF00156 | 2011P00156WEDE | VCSEL ARRAY WITH INCREASED EFFICIENCY | 09.03.2011 DE | 12708970.4 | EP 2684263 A | 60 2012 007 299.7 | National Procedure - Granted after Opposition Period |
| 2011PF00156 | 2011P00156WETR | VCSEL ARRAY WITH INCREASED EFFICIENCY | 09.03.2011 TR | 12708970.4 | EP 2684263 A | 2684263 | National Procedure - Granted after Opposition Period |
| 2011PF01005 | 2011P01005WOCN | A METHOD OF ASSEMBLING VCSEL CHIPS ON A SUB-MOUNT | 10.10.2011 CN | 201280049772.3 | CN 103843211 A | 201280049772.3 | National Procedure - Granted |
| 2011PF01005 | 2011P01005WOJP | A METHOD OF ASSEMBLING VCSEL CHIPS ON A SUB-MOUNT | 10.10.2011 JP | 2014-534035 | | | National Procedure |
| 2011PF01005 | 2011P01005WE | A METHOD OF ASSEMBLING VCSEL CHIPS ON A SUB-MOUNT | 10.10.2011 | 12795067.5 | EP 2748902 A | | EPC Procedure |
| 2011PF01005 | 2011P01005WOUS | A METHOD OF ASSEMBLING VCSEL CHIPS ON A SUB-MOUNT | 10.10.2011 US | 14/350404 | US 20140240192 A1 | 9065255 | National Procedure - Granted |
| 2011PF01005 | 2011P01005WORU | A METHOD OF ASSEMBLING VCSEL CHIPS ON A SUB-MOUNT | 10.10.2011 RU | 2014118435 | 2014118435 | 2610338 | National Procedure - Granted |
| 2011PF01005 | 2011P01005WOIN | A METHOD OF ASSEMBLING VCSEL CHIPS ON A SUB-MOUNT | 10.10.2011 IN | 2387/CHENP/2014 | | | National Procedure |
| 2011PF01005 | 2011P01005WOBR | A METHOD OF ASSEMBLING VCSEL CHIPS ON A SUB-MOUNT | 10.10.2011 BR | BR 11 2014 008335 3 | 2415 | | National Procedure |
| 2011PF02071 | 2011P02071WEGB | LIGHT SOURCE, USE OF A DRIVER AND METHOD FOR DRIVING | 02.03.2012 GB | 13715760.8 | EP 2820921 A | 2820921 | National Procedure - Granted |
| 2011PF02071 | 2011P02071WOJP | LIGHT SOURCE, USE OF A DRIVER AND METHOD FOR DRIVING | 02.03.2012 JP | 2014-559326 | | 6134337 | National Procedure - Granted |
| 2011PF02071 | 2011P02071WOBR | LIGHT SOURCE, USE OF A DRIVER AND METHOD FOR DRIVING | 02.03.2012 BR | BR 11 2014 021280 5 | 112014021280-5 A2 | | National Procedure |
| 2011PF02071 | 2011P02071WORU | LIGHT SOURCE, USE OF A DRIVER AND METHOD FOR DRIVING | 02.03.2012 RU | 2014139830 | 2014139830 | 2619157 | National Procedure - Granted |
| 2011PF02071 | 2011P02071WOUS | LIGHT SOURCE, USE OF A DRIVER AND METHOD FOR DRIVING | 02.03.2012 US | 14/380843 | US 20150008700 A1 | 9022106 | National Procedure - Granted |
| 2011PF02071 | 2011P02071WEFR | LIGHT SOURCE, USE OF A DRIVER AND METHOD FOR DRIVING | 02.03.2012 FR | 13715760.8 | EP 2820921 A | 2820921 | National Procedure - Granted |
| 2011PF02071 | 2011P02071WEDE | LIGHT SOURCE, USE OF A DRIVER AND METHOD FOR DRIVING | 02.03.2012 DE | 13715760.8 | EP 2820921 A | 60 2013 025 520.5 | National Procedure - Granted |
| 2011PF02071 | 2011P02071WE | LIGHT SOURCE, USE OF A DRIVER AND METHOD FOR DRIVING | 02.03.2012 | 13715760.8 | EP 2820921 A | 2820921 | EPC Procedure - Granted |
| 2011PF02071 | 2011P02071WOIN | LIGHT SOURCE, USE OF A DRIVER AND METHOD FOR DRIVING | 02.03.2012 IN | 6929/CHENP/2014 | | | National Procedure |
| 2011PF02071 | 2011P02071WOCN | LIGHT SOURCE, USE OF A DRIVER AND METHOD FOR DRIVING | 02.03.2012 CN | 201380012206.0 | CN 104247562 A | 201380012206.0 | National Procedure - Granted |
| 2011PF02111 | 2011P02111WOCN | LIGHTING APPARATUS FOR INFRARED CAMERA SYSTEM COMPRISING ARRAY OF VERTICAL-CAVITY SURFACE - EMITTING LASERS | 22.02.2012 CN | 201380010602.0 | CN 104126258 | 201380010602.0 | National Procedure - Granted |
| 2011PF02111 | 2011P02111WE | LIGHTING APPARATUS FOR INFRARED CAMERA SYSTEM COMPRISING ARRAY OF VERTICAL-CAVITY SURFACE - EMITTING LASERS | 22.02.2012 | 13719235.7 | EP 2817672 A | | EPC Procedure |
| 2011PF02111 | 2011P02111WORU | LIGHTING APPARATUS FOR INFRARED CAMERA SYSTEM COMPRISING ARRAY OF VERTICAL-CAVITY SURFACE - EMITTING LASERS | 22.02.2012 RU | 2014137518 | 2014137518 A | 2632254 | National Procedure - Granted |
| 2011PF02111 | 2011P02111WOBR | LIGHTING APPARATUS FOR INFRARED CAMERA SYSTEM COMPRISING ARRAY OF VERTICAL-CAVITY SURFACE - EMITTING LASERS | 22.02.2012 BR | BR 11 2014 020583 0 | 2026 | | National Procedure |
| 2011PF02111 | 2011P02111WOUS | LIGHTING APPARATUS FOR INFRARED CAMERA SYSTEM COMPRISING ARRAY OF VERTICAL-CAVITY SURFACE - EMITTING LASERS | 22.02.2012 US | 14/379526 | US 20150022668 A1 | 10018887 | National Procedure - Granted |
| 2011PF02111 | 2011P02111WOIN | LIGHTING APPARATUS FOR INFRARED CAMERA SYSTEM COMPRISING ARRAY OF VERTICAL-CAVITY SURFACE - EMITTING LASERS | 22.02.2012 IN | 6846/CHENP/2014 | | | National Procedure |
| 2011PF02111 | 2011P02111WOJP | LIGHTING APPARATUS FOR INFRARED CAMERA SYSTEM COMPRISING ARRAY OF VERTICAL-CAVITY SURFACE - EMITTING LASERS | 22.02.2012 JP | 2014-558254 | | 6122036 | National Procedure - Granted |
| 2011PF02356 | 2011P02356WOUS | VCSEL MODULE AND MANUFACTURE THEREOF | 14.03.2012 US | 14/382793 | US 20150071320 A1 | 9172213 B2 | National Procedure - Granted |
| 2011PF02559 | 2011P02559WOCN | HEATING SYSTEM FOR HEATING A LIVING BEING | 17.01.2012 CN | 201380005813.5 | CN 104066564 A | 201380005813.5 | National Procedure - Granted |
| 2011PF02559 | 2011P02559WEFR | HEATING SYSTEM FOR HEATING A LIVING BEING | 17.01.2012 FR | 13711468.0 | EP 2804776 A | 2804776 | National Procedure - Granted after Opposition Period |
| 2011PF02559 | 2011P02559WOJP | HEATING SYSTEM FOR HEATING A LIVING BEING | 17.01.2012 JP | 2014-551725 | | 6215841 | National Procedure - Granted |
| 2011PF02559 | 2011P02559WOIN | HEATING SYSTEM FOR HEATING A LIVING BEING | 17.01.2012 IN | 5660/CHENP/2014 | | | National Procedure |
| 2011PF02559 | 2011P02559 US01 | Personalized Heating in Electric Vehicles | 17.01.2012 US | 15/860744 | | | National Procedure |
| 2011PF02559 | 2011P02559WEIT | HEATING SYSTEM FOR HEATING A LIVING BEING | 17.01.2012 IT | 13711468.0 | EP 2804776 A | 2804776 | National Procedure - Granted after Opposition Period |
| 2011PF02559 | 2011P02559WEES | HEATING SYSTEM FOR HEATING A LIVING BEING | 17.01.2012 ES | 13711468.0 | EP 2804776 A | 2804776 | National Procedure - Granted after Opposition Period |
| 2011PF02559 | 2011P02559WEGB | HEATING SYSTEM FOR HEATING A LIVING BEING | 17.01.2012 GB | 13711468.0 | EP 2804776 A | 2804776 | National Procedure - Granted after Opposition Period |
| 2011PF02559 | 2011P02559WOUS | HEATING SYSTEM FOR HEATING A LIVING BEING | 17.01.2012 US | 14/369222 | US 20140345160 A1 | 9579306 | National Procedure - Granted |
| 2011PF02559 | 2011P02559WORU | HEATING SYSTEM FOR HEATING A LIVING BEING | 17.01.2012 RU | 2014133742 | RU 2014133742 A | 2624526 | National Procedure - Granted |
| 2011PF02559 | 2011P02559WETR | HEATING SYSTEM FOR HEATING A LIVING BEING | 17.01.2012 TR | 13711468.0 | EP 2804776 A | 2804776 | National Procedure - Granted after Opposition Period |
| 2011PF02559 | 2011P02559WEDE | HEATING SYSTEM FOR HEATING A LIVING BEING | 17.01.2012 DE | 13711468.0 | EP 2804776 A | 60 2013 036 420.6 | National Procedure - Granted after Opposition Period |
| 2011PF02608 | 2011P02608WEGB | SEPARATELY CONTROLLABLE ARRAY OF RADIATION ELEMENTS | 23.04.2012 GB | 13726282.0 | EP 2842392 | EP2842392 | National Procedure - Granted |
| 2011PF02608 | 2011P02608WOBR | SEPARATELY CONTROLLABLE ARRAY OF RADIATION ELEMENTS | 23.04.2012 BR | BR 11 2014 026061 5 | 11 2014 026061 3 | | National Procedure |
| 2011PF02608 | 2011P02608WEDE | SEPARATELY CONTROLLABLE ARRAY OF RADIATION ELEMENTS | 23.04.2012 DE | 13726282.0 | EP 2842392 | 602013042006.4 | National Procedure - Granted |
| 2011PF02608 | 2011P02608WE | SEPARATELY CONTROLLABLE ARRAY OF RADIATION ELEMENTS | 23.04.2012 | 13726282.0 | EP 2842392 | EP2842392 | EPC Procedure - Granted |
| 2011PF02608 | 2011P02608WORU | SEPARATELY CONTROLLABLE ARRAY OF RADIATION ELEMENTS | 23.04.2012 RU | 2014147068 | 2014147068 | 2617729 | National Procedure - Granted |
| 2011PF02608 | 2011P02608WOCN | SEPARATELY CONTROLLABLE ARRAY OF RADIATION ELEMENTS | 23.04.2012 CN | 201380021437.7 | CN 104247566 | 201380021437.7 | National Procedure - Granted |
| 2011PF02608 | 2011P02608WEFR | SEPARATELY CONTROLLABLE ARRAY OF RADIATION ELEMENTS | 23.04.2012 FR | 13726282.0 | EP 2842392 | EP2842392 | National Procedure - Granted |
| 2011PF02608 | 2011P02608WOJP | SEPARATELY CONTROLLABLE ARRAY OF RADIATION ELEMENTS | 23.04.2012 JP | 2015-505057 | | 5857202 | National Procedure - Granted |



PATENT
REEL: 052114 FRAME: 0382

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 2011PF02608 | 2011P02608WOIN | SEPARATELY CONTROLLABLE ARRAY OF RADIATION ELEMENTS | 22.04.2012 IN | 7884/CHENP/2014 | | | National Procedure |
| 2011PF02608 | 2011P02608WOUS | SEPARATELY CONTROLLABLE ARRAY OF RADIATION ELEMENTS | 22.04.2012 US | 14/395525 | | 9236705 | National Procedure - Granted |
| 2011PF02656 | 2011P02656WORU | LIGHTING APPARATUS FOR PROVIDING LIGHT FOR PROCESSING AN OBJECT | 20.04.2012 RU | 2014146585 | 2014146585 | 2644599 | National Procedure - Granted |
| 2011PF02656 | 2011P02656WOCN | LIGHTING APPARATUS FOR PROVIDING LIGHT FOR PROCESSING AN OBJECT | 20.04.2012 CN | 201280020782.5 | CN 104255827 A | 201280020782.5 | National Procedure - Granted |
| 2011PF02656 | 2011P02656WOIN | LIGHTING APPARATUS FOR PROVIDING LIGHT FOR PROCESSING AN OBJECT | 20.04.2012 IN | 7882/CHENP/2014 | | | National Procedure |
| 2011PF02656 | 2011P02656WOKR | LIGHTING APPARATUS FOR PROVIDING LIGHT FOR PROCESSING AN OBJECT | 20.04.2012 KR | KR 1120147032543 | 2424 | | National Procedure |
| 2011PF02656 | 2011P02656WOJP | LIGHTING APPARATUS FOR PROVIDING LIGHT FOR PROCESSING AN OBJECT | 20.04.2012 JP | 2015-506537 | | 6226557 | National Procedure - Granted |
| 2011PF02656 | 2011P02656WOUS | LIGHTING APPARATUS FOR PROVIDING LIGHT FOR PROCESSING AN OBJECT | 20.04.2012 US | 14/394859 | | 9403378 | National Procedure - Granted |
| 2011PF02656 | 2011P02656WE | LIGHTING APPARATUS FOR PROVIDING LIGHT FOR PROCESSING AN OBJECT | 20.04.2012 | 13728873.6 | EP 2885344 | | EPC Procedure |
| 2012PF00371 | 2012P00371WOIN | LASER MODULE FOR HOMOGENEOUS LINE-SHAPED INTENSITY PROFILES | 26.06.2012 IN | 80/CHENP/2015 | | | National Procedure |
| 2012PF00371 | 2012P00371WOJP | LASER MODULE FOR HOMOGENEOUS LINE-SHAPED INTENSITY PROFILES | 26.06.2012 JP | 2015-519440 | | 5250637 | National Procedure - Granted |
| 2012PF00371 | 2012P00371WOKR | LASER MODULE FOR HOMOGENEOUS LINE-SHAPED INTENSITY PROFILES | 26.06.2012 KR | KR 11 2014 032055 3 | 2425 | | National Procedure |
| 2012PF00371 | 2012P00371WE | LASER MODULE FOR HOMOGENEOUS LINE-SHAPED INTENSITY PROFILES | 26.06.2012 | 13765444.6 | EP 2864056 A | | EPC Procedure |
| 2012PF00371 | 2012P00371WOCN | LASER MODULE FOR HOMOGENEOUS LINE-SHAPED INTENSITY PROFILES | 26.06.2012 CN | 201380033508.5 | 104396101-CN | 201380033508.5 | National Procedure - Granted |
| 2012PF00371 | 2012P00371WOUS | LASER MODULE FOR HOMOGENEOUS LINE-SHAPED INTENSITY PROFILES | 26.06.2012 US | 14/408831 | US 20150155605 A1 | 9147995 | National Procedure - Granted |
| 2012PF00371 | 2012P00371WORU | LASER MODULE FOR HOMOGENEOUS LINE-SHAPED INTENSITY PROFILES | 26.06.2012 RU | 2015101986 | RU2015101986A | 2633310 | National Procedure - Granted |
| 2012PF00411 | 2012P00411WEDE | VCSEL WITH INTRACAVITY CONTACTS | 11.07.2012 DE | 13748108.1 | EP 2873124 A | 60 2013 019 472.6 | National Procedure - Granted after Opposition Period |
| 2012PF00411 | 2012P00411WOUS | VCSEL WITH INTRACAVITY CONTACTS | 11.07.2012 US | 14/413017 | | 9627854 | National Procedure - Granted |
| 2012PF00411 | 2012P00411WEGB | VCSEL WITH INTRACAVITY CONTACTS | 11.07.2012 GB | 13748108.1 | EP 2873124 A | 2873124 | National Procedure - Granted after Opposition Period |
| 2012PF00411 | 2012P00411WOKR | VCSEL WITH INTRACAVITY CONTACTS | 11.07.2012 KR | KR 112015000831.1 | 2425 | | National Procedure |
| 2012PF00411 | 2012P00411WEFR | VCSEL WITH INTRACAVITY CONTACTS | 11.07.2012 FR | 13748108.1 | EP 2873124 A | 2873124 | National Procedure - Granted after Opposition Period |
| 2012PF00411 | 2012P00411WOJP | VCSEL WITH INTRACAVITY CONTACTS | 11.07.2012 JP | 2015-521100 | | 6216785 | National Procedure - Granted |
| 2012PF00411 | 2012P00411WOCN | VCSEL WITH INTRACAVITY CONTACTS | 11.07.2012 CN | 201380036911.3 | CN 104488142 A | 201380036911.3 | National Procedure - Granted |
| 2012PF00411 | 2012P00411WORU | VCSEL WITH INTRACAVITY CONTACTS | 11.07.2012 RU | 2015104945 | 2015104945 | 2633643 | National Procedure - Granted |
| 2012PF00411 | 2012P00411WOIN | VCSEL WITH INTRACAVITY CONTACTS | 11.07.2012 IN | 554/CHENP/2015 | | | National Procedure |
| 2012PF01749 | 2012P01749WEFR | LASER DEVICE FOR PROJECTING A STRUCTURED LIGHT PATTERN ONTO A SCENE | 29.11.2012 FR | 13826602.8 | EP 2926422 A | 2926422 | National Procedure - Granted after Opposition Period |
| 2012PF01749 | 2012P01749WOJP | LASER DEVICE FOR PROJECTING A STRUCTURED LIGHT PATTERN ONTO A SCENE | 29.11.2012 JP | 2015-544580 | | 5270668 | National Procedure - Granted |
| 2012PF01749 | 2012P01749WOCN | LASER DEVICE FOR PROJECTING A STRUCTURED LIGHT PATTERN ONTO A SCENE | 29.11.2012 CN | 201380062417.4 | CN 104798271 A | 201380062417.4 | National Procedure - Granted |
| 2012PF01749 | 2012P01749WOIN | LASER DEVICE FOR PROJECTING A STRUCTURED LIGHT PATTERN ONTO A SCENE | 29.11.2012 IN | 3553/CHENP/2015 | | | National Procedure |
| 2012PF01749 | 2012P01749WEDE | LASER DEVICE FOR PROJECTING A STRUCTURED LIGHT PATTERN ONTO A SCENE | 29.11.2012 DE | 13826602.8 | EP 2926422 A | 60 2013 022 902.3 | National Procedure - Granted after Opposition Period |
| 2012PF01749 | 2012P01749WOUS | LASER DEVICE FOR PROJECTING A STRUCTURED LIGHT PATTERN ONTO A SCENE | 29.11.2012 US | 14/647838 | | | National Procedure |
| 2012PF01749 | 2012P01749WOKR | LASER DEVICE FOR PROJECTING A STRUCTURED LIGHT PATTERN ONTO A SCENE | 29.11.2012 KR | KR 112015020733 | 2427 | | National Procedure |
| 2012PF01749 | 2012P01749WEGB | LASER DEVICE FOR PROJECTING A STRUCTURED LIGHT PATTERN ONTO A SCENE | 29.11.2012 GB | 13826602.8 | EP 2926422 A | 2926422 | National Procedure - Granted after Opposition Period |
| 2012PF01749 | 2012P01749WORU | LASER DEVICE FOR PROJECTING A STRUCTURED LIGHT PATTERN ONTO A SCENE | 29.11.2012 RU | 2015125550 | | 2655475 | National Procedure - Granted |
| 2012PF01981 | 2012P01981WEDE | Laser device with adjustable polarization | 02.08.2013 DE | 14744344.4 | EP 3028553 A | 60 2014 020 717.6 | National Procedure - Granted |
| 2012PF01981 | 2012P01981WOCN | Laser device with adjustable polarization | 02.08.2013 CN | 201480043770.2 | CN 105474482 | | National Procedure |
| 2012PF01981 | 2012P01981WORU | Laser device with adjustable polarization | 02.08.2013 RU | 2016107384 | 2S | 2659749 | National Procedure - Granted |
| 2012PF01981 | 2012P01981WE | Laser device with adjustable polarization | 02.08.2013 | 14744344.4 | EP 3028553 A | 3028553 | EPC Procedure - Granted |
| 2012PF01981 | 2012P01981WOIN | Laser device with adjustable polarization | 02.08.2013 IN | 201647005796 | | | National Procedure |
| 2012PF01981 | 2012P01981WEGB | Laser device with adjustable polarization | 02.08.2013 GB | 14744344.4 | EP 3028553 A | 3028553 | National Procedure - Granted |
| 2012PF01981 | 2012P01981WEFR | Laser device with adjustable polarization | 02.08.2013 FR | 14744344.4 | EP 3028553 A | 3028553 | National Procedure - Granted |
| 2012PF01981 | 2012P01981WOKR | Laser device with adjustable polarization | 02.08.2013 KR | KR 11 2016 001885 0 | KR1120160018850 | | National Procedure |
| 2012PF01981 | 2012P01981WOJP | Laser device with adjustable polarization | 02.08.2013 JP | 2016-530477 | | | National Procedure |
| 2012PF01981 | 2012P01981WOUS | Laser device with adjustable polarization | 02.08.2013 US | 14/907636 | | 10135225 | National Procedure - Granted |
| 2013PF00069 | 2013P00069WOJP | MOUNTING LAYER FOR COOLING STRUCTURE | 08.05.2013 JP | 2016-512251 | | 6337832 | National Procedure - Granted |
| 2013PF00069 | 2013P00069WE | MOUNTING LAYER FOR COOLING STRUCTURE | 08.05.2013 | 14726855.2 | EP 2994963 | | EPC Procedure |
| 2013PF00069 | 2013P00069WEGB | MOUNTING LAYER FOR COOLING STRUCTURE | 08.05.2013 GB | 14726855.2 | EP 2994963 | | National Procedure - Preparation of Filing Documents |
| 2013PF00069 | 2013P00069WOIN | MOUNTING LAYER FOR COOLING STRUCTURE | 08.05.2013 IN | 7475/CHENP/2015 | | | National Procedure |
| 2013PF00069 | 2013P00069WOCN | MOUNTING LAYER FOR COOLING STRUCTURE | 08.05.2013 CN | 201480027745.1 | CN 105191027 A | | National Procedure |
| 2013PF00069 | 2013P00069WEDE | MOUNTING LAYER FOR COOLING STRUCTURE | 08.05.2013 DE | 14726855.2 | EP 2994963 | | National Procedure - Preparation of Filing Documents |
| 2013PF00069 | 2013P00069WEFR | MOUNTING LAYER FOR COOLING STRUCTURE | 08.05.2013 FR | 14726855.2 | EP 2994963 | | National Procedure - Preparation of Filing Documents |
| 2013PF00069 | 2013P00069WORU | MOUNTING LAYER FOR COOLING STRUCTURE | 08.05.2013 RU | 2015152430 | RU2015152430 | 2655017 | National Procedure - Granted |
| 2013PF00069 | 2013P00069WOUS | MOUNTING LAYER FOR COOLING STRUCTURE | 08.05.2013 US | 14/885,705 | | 9525455 | National Procedure - Granted |
| 2013PF00554 | 2013P00554WORU | Cooling device for cooling a laser arrangement and laser system comprising cooling devices | 02.05.2013 RU | 2015151394 | RU2015151394 A | 2657120 | National Procedure - Granted |
| 2013PF00554 | 2013P00554WE | Cooling device for cooling a laser arrangement and laser system comprising cooling devices | 02.05.2013 | 14722159.2 | EP 2992577 A | EP2992577 | EPC Procedure - Granted |
| 2013PF00554 | 2013P00554WEGB | Cooling device for cooling a laser arrangement and laser system comprising cooling devices | 02.05.2013 GB | 14722159.2 | EP 2992577 A | EP2992577 | National Procedure - Granted |
| 2013PF00554 | 2013P00554WOUS | Cooling device for cooling a laser arrangement and laser system comprising cooling devices | 02.05.2013 US | 14/787632 | | 9559490 | National Procedure - Granted |
| 2013PF00554 | 2013P00554WOCN | Cooling device for cooling a laser arrangement and laser system comprising cooling devices | 02.05.2013 CN | 201480024906.5 | CN 105164872 | | National Procedure |
| 2013PF00554 | 2013P00554WOJP | Cooling device for cooling a laser arrangement and laser system comprising cooling devices | 02.05.2013 JP | 2016-511054 | | 6418235 | National Procedure - Granted |
| 2013PF00554 | 2013P00554WOKR | Cooling device for cooling a laser arrangement and laser system comprising cooling devices | 02.05.2013 KR | KR 11 2015 027296 7 | KR1120150272967 | | National Procedure |
| 2013PF00554 | 2013P00554WOIN | Cooling device for cooling a laser arrangement and laser system comprising cooling devices | 02.05.2013 IN | 7578/CHENP/2015 | | | National Procedure |
| 2013PF00554 | 2013P00554WEFR | Cooling device for cooling a laser arrangement and laser system comprising cooling devices | 02.05.2013 FR | 14722159.2 | EP 2992577 A | EP2992577 | National Procedure - Granted |
| 2013PF00554 | 2013P00554WEDE | Cooling device for cooling a laser arrangement and laser system comprising cooling devices | 02.05.2013 DE | 14722159.2 | EP 2992577 A | 60 2014 035 527.9 | National Procedure - Granted |
| 2013PF01792 | 2013P01792WOUS | COMPACT LASER DEVICE | 16.10.2013 US | 15/028546 | US 20160254640 A1 | 10116115 | National Procedure - Granted |
| 2013PF01792 | 2013P01792WOIN | COMPACT LASER DEVICE | 16.10.2013 IN | 201647012774 | | | National Procedure |
| 2013PF01792 | 2013P01792WOCN | COMPACT LASER DEVICE | 16.10.2013 CN | 201480056961.2 | CN 105637634 A | | National Procedure |
| 2013PF01792 | 2013P01792WOKR | COMPACT LASER DEVICE | 16.10.2013 KR | KR 11 2016 009140 4 | KR1120160091404 | | National Procedure |
| 2013PF01792 | 2013P01792WOJP | COMPACT LASER DEVICE | 16.10.2013 JP | 2016-522769 | | | National Procedure |
| 2013PF01792 | 2013P01792WE | COMPACT LASER DEVICE | 16.10.2013 | 14783863.5 | EP 3058592 A | | EPC Procedure |
| 2013PF01792 | 2013P01792 US | Low Cost, High volume, High Yield VCSEL concept for next generation sensing applications | 16.10.2013 US | 15/164205 | | | National Procedure |
| 2013PF01792 | 2013P01792WORU | COMPACT LASER DEVICE | 16.10.2013 RU | 2016118623 | 2016118623 | 2672155 | National Procedure - Granted |
| 2013PF01856 | 2013P01856WE | LASER MODULE WITH SIMPLIFIED ALIGNMENT | 20.12.2013 | 14806840.7 | EP 3084903 | | EPC Procedure |
| 2013PF01856 | 2013P01856WOIN | LASER MODULE WITH SIMPLIFIED ALIGNMENT | 20.12.2013 IN | 201647022676 | | | National Procedure |
| 2013PF01856 | 2013P01856WOJP | LASER MODULE WITH SIMPLIFIED ALIGNMENT | 20.12.2013 JP | 2016-540074 | | 6359781 | National Procedure - Granted |
| 2013PF01856 | 2013P01856WOCN | LASER MODULE WITH SIMPLIFIED ALIGNMENT | 20.12.2013 CN | 201480069744.2 | CN 105814760 | | National Procedure |
| 2013PF01856 | 2013P01856WOUS | LASER MODULE WITH SIMPLIFIED ALIGNMENT | 20.12.2013 US | 15/104595 | US 20160315447 A1 | 9882346 | National Procedure - Granted |
| 2013PF01859 | 2013P01859WEDE | LASER PRINTING SYSTEM | 17.12.2013 DE | 14812255.9 | EP 3083254 A | | National Procedure - Preparation of Filing Documents |
| 2013PF01859 | 2013P01859WORU | LASER PRINTING SYSTEM | 17.12.2013 RU | 2016128795 | 2016128792 | 2656205 | National Procedure - Granted |
| 2013PF01859 | 2013P01859WE | LASER PRINTING SYSTEM | 17.12.2013 | 14812255.9 | EP 3083254 A | | EPC Procedure |
| 2013PF01859 | 2013P01859WEFR | LASER PRINTING SYSTEM | 17.12.2013 FR | 14812255.9 | EP 3083254 A | | National Procedure - Preparation of Filing Documents |
| 2013PF01859 | 2013P01859WOIN | LASER PRINTING SYSTEM | 17.12.2013 IN | 201647021588 | | | National Procedure |



PATENT
REEL: 052114 FRAME: 0383

Transfer Patent Rights (prepared for Trumpf)
Annex A-1



| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 2013PF01859 | 2013P01859WOUS | LASER PRINTING SYSTEM | 17.12.2013 US | 15/103558 | US 20160311230 A1 | | National Procedure |
| 2013PF01859 | 2013P01859WOID | LASER PRINTING SYSTEM | 17.12.2013 ID | P-00 2016 03982 | 2017/08450 | | National Procedure |
| 2013PF01859 | 2013P01859WOCN | LASER PRINTING SYSTEM | 17.12.2013 CN | 201480075736.3 | CN 105980155 | 201480075736.3 | National Procedure - Granted |
| 2013PF01859 | 2013P01859WOKR | LASER PRINTING SYSTEM | 17.12.2013 KR | KR 11 2016 013879 X | KR 1120160138?9-1 | | National Procedure |
| 2013PF01859 | 2013P01859WEGB | LASER PRINTING SYSTEM | 17.12.2013 GB | 14812255.2 | EP 3083254 A | | National Procedure - Preparation of Filing Documents |
| 2013PF01859 | 2013P01859WOJP | LASER PRINTING SYSTEM | 17.12.2013 JP | 2016-538064 | | 5900760 | National Procedure - Granted |
| 2013PF01859 | 2013P01859WETR | LASER PRINTING SYSTEM | 17.12.2013 TR | 14812255.2 | EP 3083254 A | | National Procedure - Preparation of Filing Documents |
| 2013PF01859 | 2013P01859WOMX | LASER PRINTING SYSTEM | 17.12.2013 MX | MX/A/2016/007805 | | | National Procedure |
| 2013PF02170 | 2013P02170WE | HEATING SYSTEM COMPRISING SEMICONDUCTOR LIGHT SOURCES | 17.01.2014 | 15700131.4 | EP 3095128 | | EPC Procedure |
| 2013PF02170 | 2013P02170WOCN | HEATING SYSTEM COMPRISING SEMICONDUCTOR LIGHT SOURCES | 17.01.2014 CN | 201580004780.X | CN106415880 | | National Procedure |
| 2013PF02170 | 2013P02170WORU | HEATING SYSTEM COMPRISING SEMICONDUCTOR LIGHT SOURCES | 17.01.2014 RU | 2016133371 | 2016133371 | 2669545 | National Procedure - Granted |
| 2013PF02170 | 2013P02170WOKR | HEATING SYSTEM COMPRISING SEMICONDUCTOR LIGHT SOURCES | 17.01.2014 KR | KR 11 2016 018264 1 | KR 1120167015264-1 | | National Procedure |
| 2013PF02170 | 2013P02170WOUS | HEATING SYSTEM COMPRISING SEMICONDUCTOR LIGHT SOURCES | 17.01.2014 US | 15/111025 | US 20160381732 A1 | 10159112 | National Procedure - Granted |
| 2013PF02170 | 2013P02170WOJP | HEATING SYSTEM COMPRISING SEMICONDUCTOR LIGHT SOURCES | 17.01.2014 JP | 2016-546512 | | 6461168 | National Procedure - Granted |
| 2013PF02170 | 2013P02170WOIN | HEATING SYSTEM COMPRISING SEMICONDUCTOR LIGHT SOURCES | 17.01.2014 IN | 201647024822 | | | National Procedure |
| 2014PF00125 | 2014P00125WOIN | LIGHT EMITTING SEMICONDUCTOR DEVICES WITH GETTER LAYER | 25.02.2014 IN | 201647028096 | | | National Procedure |
| 2014PF00125 | 2014P00125WOUS | LIGHT EMITTING SEMICONDUCTOR DEVICES WITH GETTER LAYER | 25.02.2014 US | 15/122502 | | | National Procedure |
| 2014PF00125 | 2014P00125WORU | LIGHT EMITTING SEMICONDUCTOR DEVICES WITH GETTER LAYER | 25.02.2014 RU | 2016137804 | 2016137804 | 2672776 | National Procedure - Granted |
| 2014PF00125 | 2014P00125WE | LIGHT EMITTING SEMICONDUCTOR DEVICES WITH GETTER LAYER | 25.02.2014 | 15705417.7 | EP 3111520 | | EPC Procedure |
| 2014PF00125 | 2014P00125WOJP | LIGHT EMITTING SEMICONDUCTOR DEVICES WITH GETTER LAYER | 25.02.2014 JP | 2016-553545 | | | National Procedure |
| 2014PF00125 | 2014P00125WOCN | LIGHT EMITTING SEMICONDUCTOR DEVICES WITH GETTER LAYER | 25.02.2014 CN | 201580010521.3 | CN 106030936 A | | National Procedure |
| 2014PF00982 | 2014P00982WOIN | PRINTED CIRCUIT BOARD AND PRINTED CIRCUIT BOARD ARRANGEMENT | 24.09.2014 IN | 201747012510 | | | National Procedure |
| 2014PF00982 | 2014P00982WOUS | PRINTED CIRCUIT BOARD AND PRINTED CIRCUIT BOARD ARRANGEMENT | 24.09.2014 US | 15/506035 | | 10129386 | National Procedure - Granted |
| 2014PF00982 | 2014P00982WOJP | PRINTED CIRCUIT BOARD AND PRINTED CIRCUIT BOARD ARRANGEMENT | 24.09.2014 JP | 2017-516153 | | | National Procedure |
| 2014PF00982 | 2014P00982WOCN | PRINTED CIRCUIT BOARD AND PRINTED CIRCUIT BOARD ARRANGEMENT | 24.09.2014 CN | 201580051515.5 | 106717135 | | National Procedure |
| 2014PF00982 | 2014P00982WE | PRINTED CIRCUIT BOARD AND PRINTED CIRCUIT BOARD ARRANGEMENT | 24.09.2014 | 15767129.2 | 3198002 | | EPC Procedure |
| 2014PF00990 | 2014P00990WOIN | Vertical cavity surface emitting laser. | 25.08.2014 IN | 201747012874 | | | National Procedure |
| 2014PF00990 | 2014P00990WEDE | Vertical cavity surface emitting laser. | 25.08.2014 DE | 15757504.6 | EP3198691 | 60 2015 011 001.5 | National Procedure - Granted |
| 2014PF00990 | 2014P00990WE | Vertical cavity surface emitting laser. | 25.08.2014 | 15757504.6 | EP3198691 | 3198691 | EPC Procedure - Granted |
| 2014PF00990 | 2014P00990WEFR | Vertical cavity surface emitting laser. | 25.08.2014 FR | 15757504.6 | EP3198691 | 3198691 | National Procedure - Granted |
| 2014PF00990 | 2014P00990WOUS | Vertical cavity surface emitting laser. | 25.08.2014 US | 15/506032 | US-2017-0302059-A1 | 9882355 | National Procedure - Granted |
| 2014PF00990 | 2014P00990WORU | Vertical cavity surface emitting laser. | 25.08.2014 RU | 2017110626 | | 2645805 | National Procedure - Granted |
| 2014PF00990 | 2014P00990WOJP | Vertical cavity surface emitting laser. | 25.08.2014 JP | 2017-515922 | | JP6205065 | National Procedure - Granted |
| 2014PF00990 | 2014P00990WOCN | Vertical cavity surface emitting laser. | 25.08.2014 CN | 201580051823.X | 106797107 A | | National Procedure |
| 2014PF00990 | 2014P00990WOKR | Vertical cavity surface emitting laser. | 25.08.2014 KR | KR 11 2017 005853 6 | KR1120177005853-6 | | National Procedure |
| 2014PF00990 | 2014P00990WEGB | Vertical cavity surface emitting laser. | 25.08.2014 GB | 15757504.6 | EP3198691 | 3198691 | National Procedure - Granted |
| 2014PF01760 | 2014P01760WOJP | LASER SENSOR MODULE | 19.12.2014 JP | 2017-532026 | | | National Procedure |
| 2014PF01760 | 2014P01760WOIN | LASER SENSOR MODULE | 19.12.2014 IN | 201747024626 | | | National Procedure |
| 2014PF01760 | 2014P01760WE | LASER SENSOR MODULE | 19.12.2014 | EP15805501.1 | 3235078-A | | EPC Procedure |
| 2014PF01760 | 2014P01760WOUS | LASER SENSOR MODULE | 19.12.2014 US | 15/536905 | | | National Procedure |
| 2014PF01760 | 2014P01760WOCN | LASER SENSOR MODULE | 19.12.2014 CN | 201580069462.9 | CN107005023 | | National Procedure |
| 2014PF01760 | 2014P01760WORU | LASER SENSOR MODULE | 19.12.2014 RU | 2017125504 | RU 2017125504 A | | National Procedure |
| 2014PF01760 | 2014P01760WOKR | LASER SENSOR MODULE | 19.12.2014 KR | KR 11 2017 022605 2 | KR1120177022605-2 | | National Procedure |
| 2015PF00001 | 2015P00001WEFR | INFRARED LASER ILLUMINATION DEVICE | 19.02.2015 FR | 16703103.6 | EP3259512 | EP3259512 | National Procedure - Granted |
| 2015PF00001 | 2015P00001WOJP | INFRARED LASER ILLUMINATION DEVICE | 19.02.2015 JP | 2017-540236 | | 6281522 | National Procedure - Granted |
| 2015PF00001 | 2015P00001WEDE | INFRARED LASER ILLUMINATION DEVICE | 19.02.2015 DE | 16703103.6 | EP3259512 | 60 2016 006 065.5 | National Procedure - Granted |
| 2015PF00001 | 2015P00001WOUS | INFRARED LASER ILLUMINATION DEVICE | 19.02.2015 US | 15/551520 | | | National Procedure |
| 2015PF00001 | 2015P00001WEGB | INFRARED LASER ILLUMINATION DEVICE | 19.02.2015 GB | 16703103.6 | EP3259512 | EP3259512 | National Procedure - Granted |
| 2015PF00001 | 2015P00001WOIN | INFRARED LASER ILLUMINATION DEVICE | 19.02.2015 IN | 201747030828 | | | National Procedure |
| 2015PF00001 | 2015P00001WE | INFRARED LASER ILLUMINATION DEVICE | 19.02.2015 | 16703103.6 | EP3259512 | EP3259512 | EPC Procedure - Granted |
| 2015PF00001 | 2015P00001WOCN | INFRARED LASER ILLUMINATION DEVICE | 19.02.2015 CN | 201680011162.5 | 107250841 | | National Procedure |
| 2015PF00001 | 2015P00001WOKR | INFRARED LASER ILLUMINATION DEVICE | 19.02.2015 KR | KR 11 2017 017536 8 | KR1120177017536-8 | | National Procedure |
| 2015PF00001 | 2015P00001WORU | INFRARED LASER ILLUMINATION DEVICE | 19.02.2015 RU | 2017132429 | | 2672767 | National Procedure - Granted |
| 2015PF00370 | 2015P00370WOUS | SAFE LASER DEVICE FOR OPTICAL SENSING APPLICATIONS | 10.04.2015 US | 15/563636 | | 10181701 | National Procedure - Granted |
| 2015PF00370 | 2015P00370WEDE | SAFE LASER DEVICE FOR OPTICAL SENSING APPLICATIONS | 10.04.2015 DE | 16714826.1 | 3281262 | | National Procedure - Preparation of Filing Documents |
| 2015PF00370 | 2015P00370WOIN | SAFE LASER DEVICE FOR OPTICAL SENSING APPLICATIONS | 10.04.2015 IN | 201747035441 | | | National Procedure |
| 2015PF00370 | 2015P00370WOCN | SAFE LASER DEVICE FOR OPTICAL SENSING APPLICATIONS | 10.04.2015 CN | 201680020929.X | CN107466423A | | National Procedure |
| 2015PF00370 | 2015P00370WEFR | SAFE LASER DEVICE FOR OPTICAL SENSING APPLICATIONS | 10.04.2015 FR | 16714826.1 | 3281262-A | | National Procedure - Preparation of Filing Documents |
| 2015PF00370 | 2015P00370WEGB | SAFE LASER DEVICE FOR OPTICAL SENSING APPLICATIONS | 10.04.2015 GB | 16714826.1 | 3281262-A | | National Procedure - Preparation of Filing Documents |
| 2015PF00370 | 2015P00370WOJP | SAFE LASER DEVICE FOR OPTICAL SENSING APPLICATIONS | 10.04.2015 JP | 2017-548720 | | 6461367 | National Procedure - Granted |
| 2015PF00370 | 2015P00370WOKR | SAFE LASER DEVICE FOR OPTICAL SENSING APPLICATIONS | 10.04.2015 KR | KR 11 2017 021395 8 | KR1120177021395-8 | | National Procedure |
| 2015PF00370 | 2015P00370WORU | SAFE LASER DEVICE FOR OPTICAL SENSING APPLICATIONS | 10.04.2015 RU | 2017134125 | | | National Procedure |
| 2015PF00370 | 2015P00370WE | SAFE LASER DEVICE FOR OPTICAL SENSING APPLICATIONS | 10.04.2015 | 16714826.1 | 3281262-A | | EPC Procedure |
| 2015PF00438 | 2015P00438WE | VERTICAL CAVITY SURFACE EMITTING LASER | 09.06.2015 | 16728266.4 | 3308436 | 3308436 | EPC Procedure - Granted |
| 2015PF00438 | 2015P00438WEFR | VERTICAL CAVITY SURFACE EMITTING LASER | 09.06.2015 FR | 16728266.4 | 3308436 | 3308436 | National Procedure - Granted |
| 2015PF00438 | 2015P00438WEGB | VERTICAL CAVITY SURFACE EMITTING LASER | 09.06.2015 GB | 16728266.4 | 3308436 | 3308436 | National Procedure - Granted |
| 2015PF00438 | 2015P00438WOKR | VERTICAL CAVITY SURFACE EMITTING LASER | 09.06.2015 KR | 10-2017-7036064 | | | National Procedure |
| 2015PF00438 | 2015P00438WORU | VERTICAL CAVITY SURFACE EMITTING LASER | 09.06.2015 RU | 2017143026 | | 2655716 | National Procedure - Granted |
| 2015PF00438 | 2015P00438WOUS | VERTICAL CAVITY SURFACE EMITTING LASER | 09.06.2015 US | 15/573846 | | 10126656 | National Procedure - Granted |
| 2015PF00438 | 2015P00438WOIN | VERTICAL CAVITY SURFACE EMITTING LASER | 09.06.2015 IN | 201747044563 | | | National Procedure |
| 2015PF00438 | 2015P00438WOJP | VERTICAL CAVITY SURFACE EMITTING LASER | 09.06.2015 JP | 2017-563332 | | | National Procedure |
| 2015PF00438 | 2015P00438 US | VERTICAL CAVITY SURFACE EMITTING LASER | 09.06.2015 US | 16/167664 | | | National Procedure |
| 2015PF00438 | 2015P00438WOCN | VERTICAL CAVITY SURFACE EMITTING LASER | 09.06.2015 CN | 201680033555.0 | CN 107690737 A | | National Procedure |
| 2015PF00438 | 2015P00438WEDE | VERTICAL CAVITY SURFACE EMITTING LASER | 09.06.2015 DE | 16728266.4 | 3308436 | 60 2016 010 162.5 | National Procedure - Granted |
| 2015PF00438 | 2015P00438WOKR | VERTICAL CAVITY SURFACE EMITTING LASER | 09.06.2015 KR | KR 11 2017 035503 4 | KR11 2017035503-A | | National Procedure |
| 2015PF00438 | 2015P00438EP D1 | VERTICAL CAVITY SURFACE EMITTING LASER | 09.06.2015 | 18203756.8 | | | EPC Procedure |
| 2015PF00613 | 2015P00613WEGB | LASER PRINTING SYSTEM | 23.07.2015 GB | 16744702.8 | 3325276 | 3325276 | National Procedure - Granted |
| 2015PF00613 | 2015P00613WEDE | LASER PRINTING SYSTEM | 23.07.2015 DE | 16744702.8 | 3325276 | 60 2016 002 258.4 | National Procedure - Granted |
| 2015PF00613 | 2015P00613WOUS | LASER PRINTING SYSTEM | 23.07.2015 US | 15/742547 | | | National Procedure |
| 2015PF00613 | 2015P00613WEFR | LASER PRINTING SYSTEM | 23.07.2015 FR | 16744702.8 | 3325276 | 3325276 | National Procedure - Granted |
| 2015PF00613 | 2015P00613WORU | LASER PRINTING SYSTEM | 23.07.2015 RU | 2018106475 | | | National Procedure |



PATENT
REEL: 052114 FRAME: 0384

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 2015PF00613 | 2015P00613WE | LASER PRINTING SYSTEM | 23.07.2015 | 15744702.9 | 3325276 | 3325276 | EPC Procedure - Granted |
| 2015PF00613 | 2015P00613WOJP | LASER PRINTING SYSTEM | 23.07.2015 JP | 2018-502414 | | 6383895 | National Procedure - Granted |
| 2015PF00613 | 2015P00613WOCN | LASER PRINTING SYSTEM | 23.07.2015 CN | 201680055586.1 | CN108025560-A | | National Procedure |
| 2015PF00613 | 2015P00613WOIN | LASER PRINTING SYSTEM | 23.07.2015 IN | 201847005707 | | | National Procedure |
| 2015PF00613 | 2015P00613WOBR | LASER PRINTING SYSTEM | 23.07.2015 BR | BR 11 2018 001516 1 | BR112018001516-1 | | National Procedure |
| 2015PF00959 | 2015P00959WE | LASER SENSOR FOR PARTICLE DENSITY DETECTION | 30.07.2015 | 15739114.3 | 3328140 | | EPC Procedure |
| 2015PF00959 | 2015P00959WOCN | LASER SENSOR FOR PARTICLE DENSITY DETECTION | 30.07.2015 CN | 201680044686.2 | CN 107850527 A | | National Procedure |
| 2015PF00959 | 2015P00959WOJP | LASER SENSOR FOR PARTICLE DENSITY DETECTION | 30.07.2015 JP | 2017-560916 | | | National Procedure |
| 2015PF00959 | 2015P00959WOBR | LASER SENSOR FOR PARTICLE DENSITY DETECTION | 30.07.2015 BR | BR 11 2018 002049 4 | BR112018002049-4 | | National Procedure |
| 2015PF00959 | 2015P00959WORU | LASER SENSOR FOR PARTICLE DENSITY DETECTION | 30.07.2015 RU | PCT/EP2016/066754 | | | National Procedure |
| 2015PF00959 | 2015P00959WOIN | LASER SENSOR FOR PARTICLE DENSITY DETECTION | 30.07.2015 IN | 201847005727 | | | National Procedure |
| 2015PF00959 | 2015P00959WOUS | LASER SENSOR FOR PARTICLE DENSITY DETECTION | 30.07.2015 US | 15/745164 | | | National Procedure |
| 2015PF00960 | 2015P00960WEDE | LASER SENSOR FOR PARTICLE SIZE DETECTION | 30.07.2015 DE | 16754420.6 | 3329250 | 60 2016 008 785.8 | National Procedure - Granted |
| 2015PF00960 | 2015P00960WOCN | LASER SENSOR FOR PARTICLE SIZE DETECTION | 30.07.2015 CN | 201680057163.3 | 108027312 | | National Procedure |
| 2015PF00960 | 2015P00960WOJP | LASER SENSOR FOR PARTICLE SIZE DETECTION | 30.07.2015 JP | 2017-564280 | | 6356556 | National Procedure - Granted |
| 2015PF00960 | 2015P00960WORU | LASER SENSOR FOR PARTICLE SIZE DETECTION | 30.07.2015 RU | 2018107072 | | | National Procedure |
| 2015PF00960 | 2015P00960WEFR | LASER SENSOR FOR PARTICLE SIZE DETECTION | 30.07.2015 FR | 16754420.6 | 3329250 | 3329250 | National Procedure - Granted |
| 2015PF00960 | 2015P00960WOUS | LASER SENSOR FOR PARTICLE SIZE DETECTION | 30.07.2015 US | 15/746470 | | | National Procedure |
| 2015PF00960 | 2015P00960WEGB | LASER SENSOR FOR PARTICLE SIZE DETECTION | 30.07.2015 GB | 16754420.6 | 3329250 | 3329250 | National Procedure - Granted |
| 2015PF00960 | 2015P00960WE | LASER SENSOR FOR PARTICLE SIZE DETECTION | 30.07.2015 | 16754420.6 | 3329250 | 3329250 | EPC Procedure - Granted |
| 2015PF00960 | 2015P00960WOIN | LASER SENSOR FOR PARTICLE SIZE DETECTION | 30.07.2015 IN | 201847005726 | | | National Procedure |
| 2015PF00960 | 2015P00960WOBR | LASER SENSOR FOR PARTICLE SIZE DETECTION | 30.07.2015 BR | BR 11 2018 001940 2 | BR112018001940-2 | | National Procedure |
| 2015PF01037 | 2015P01037WOCN | LASER SENSOR FOR MULTI PARAMETER DETECTION | 30.07.2015 CN | 201680044552.2 | CN 107850526 A | | National Procedure |
| 2015PF01037 | 2015P01037WORU | LASER SENSOR FOR MULTI PARAMETER DETECTION | 30.07.2015 RU | 2018107215 | | | National Procedure |
| 2015PF01037 | 2015P01037WOBR | LASER SENSOR FOR MULTI PARAMETER DETECTION | 30.07.2015 BR | BR 11 2018 002029 7 | BR112018002029-7 | | National Procedure |
| 2015PF01037 | 2015P01037WOJP | LASER SENSOR FOR MULTI PARAMETER DETECTION | 30.07.2015 JP | 2017-565259 | | | National Procedure |
| 2015PF01037 | 2015P01037WE | LASER SENSOR FOR MULTI PARAMETER DETECTION | 30.07.2015 | EP16739146.2 | 3329249-A | | EPC Procedure |
| 2015PF01037 | 2015P01037WOIN | LASER SENSOR FOR MULTI PARAMETER DETECTION | 30.07.2015 IN | 201847005725 | | | National Procedure |
| 2015PF01037 | 2015P01037WOUS | LASER SENSOR FOR MULTI PARAMETER DETECTION | 30.07.2015 US | 15/748207 | | | National Procedure |
| 2015PF01107 | 2015P01107WOJP | LIGHT EMITTING DEVICE | 01.10.2015 JP | 2018-516108 | | | National Procedure |
| 2015PF01107 | 2015P01107WOUS | LIGHT EMITTING DEVICE | 01.10.2015 US | 15/762,277 | | | National Procedure |
| 2015PF01107 | 2015P01107WORU | LIGHT EMITTING DEVICE | 01.10.2015 RU | 2018115845 | | | National Procedure |
| 2015PF01107 | 2015P01107WOBR | LIGHT EMITTING DEVICE | 01.10.2015 BR | BR 11 2018 005139 5 | BR112018005139-5 | | National Procedure |
| 2015PF01107 | 2015P01107WOCN | LIGHT EMITTING DEVICE | 01.10.2015 CN | 201680057957.1 | CN108140011 | | National Procedure |
| 2015PF01107 | 2015P01107WE | LIGHT EMITTING DEVICE | 01.10.2015 | 15767734.9 | EP3357734 | | EPC Procedure |
| 2015PF01107 | 2015P01107WOIN | LIGHT EMITTING DEVICE | 01.10.2015 IN | 201847013172 | | | National Procedure |
| 2015PF01888 | 2015P01888WOUS | LASER SENSOR FOR ULTRA-FINE PARTICLE SIZE DETECTION | 21.03.2016 US | 16/086046 | | | National Procedure |
| 2015PF01888 | 2015P01888WORU | LASER SENSOR FOR ULTRA-FINE PARTICLE SIZE DETECTION | 21.03.2016 RU | 2018136885 | | | National Procedure |
| 2015PF01888 | 2015P01888WOJP | LASER SENSOR FOR ULTRA-FINE PARTICLE SIZE DETECTION | 21.03.2016 JP | 2018-549288 | | | National Procedure |
| 2015PF01888 | 2015P01888WOBR | LASER SENSOR FOR ULTRA-FINE PARTICLE SIZE DETECTION | 21.03.2016 BR | BR 11 2018 069050 8 | BR112018069058-5 | | National Procedure |
| 2015PF01888 | 2015P01888WE | LASER SENSOR FOR ULTRA-FINE PARTICLE SIZE DETECTION | 21.03.2016 | 17711674.5 | 3433599 | | EPC Procedure |
| 2015PF01888 | 2015P01888WOCN | LASER SENSOR FOR ULTRA-FINE PARTICLE SIZE DETECTION | 21.03.2016 CN | 201780019007.0 | CN 108780036 A | | National Procedure |
| 2015PF01888 | 2015P01888WOIN | LASER SENSOR FOR ULTRA-FINE PARTICLE SIZE DETECTION | 21.03.2016 IN | 201847035218 | | | National Procedure |
| 2015PF01845 | 2015P01845 DE | Particulate sensor device | 22.04.2015 DE | 10 2015 207 289.4 | DE102015207289A1 | | National Procedure |
| 2015PF01845 | 2015P01845 JP | Particulate sensor device | 22.04.2015 JP | 2016086250 | JP2016224034A | | National Procedure |
| 2015PF01845 | 2015P01845 IN | Particulate sensor device | 22.04.2015 IN | 201614014006A | | | National Procedure |
| 2015PF01845 | 2015P01845 US | Particulate sensor device | 22.04.2015 US | 15/130517 | US 20160313243 A1 | 9857257 | National Procedure - Granted |
| 2015PF01845 | 2015P01845 CN | Particulate sensor device | 22.04.2015 CN | CN201610257700 | CN 106066256 A | | National Procedure |
| 2016PF00063 | 2016P00063WOJP | COMPACT LASER SENSOR | 18.05.2016 JP | 2018-559438 | | | National Procedure |
| 2016PF00063 | 2016P00063WE | COMPACT LASER SENSOR | 18.05.2016 | 17722780.4 | 3458875 | | EPC Procedure |
| 2016PF00063 | 2016P00063WOUS | COMPACT LASER SENSOR | 18.05.2016 US | 16/300317 | | | National Procedure |
| 2016PF00063 | 2016P00063WOCN | COMPACT LASER SENSOR | 19.05.2016 CN | 201780030064.0 | 109154560 | | National Procedure |
| 2016PF00063 | 2016P00063WOBR | COMPACT LASER SENSOR | 19.05.2016 BR | BR 11 2018 073666 4 | | | National Procedure |
| 2016PF00063 | 2016P00063WOIN | COMPACT LASER SENSOR | 18.05.2016 IN | 20184704557X | | | National Procedure |
| 2016PF00063 | 2016P00063WORU | COMPACT LASER SENSOR | 18.05.2016 RU | 2018144786 | | | National Procedure |
| 2016PF00121 | 2016P00121WOJP | OPTICAL PARTICLE SENSOR | 18.05.2016 JP | 2018-560059 | | | National Procedure |
| 2016PF00121 | 2016P00121WOUS | OPTICAL PARTICLE SENSOR | 19.05.2016 US | 16/300554 | | | National Procedure |
| 2016PF00121 | 2016P00121WE | OPTICAL PARTICLE SENSOR | 19.05.2016 | 17725211.3 | 3458831 | | EPC Procedure |
| 2016PF00121 | 2016P00121WORU | OPTICAL PARTICLE SENSOR | 19.05.2016 RU | 2018144805 | | | National Procedure |
| 2016PF00121 | 2016P00121WOIN | OPTICAL PARTICLE SENSOR | 19.05.2016 IN | 201847043577 | | | National Procedure |
| 2016PF00121 | 2016P00121WOBR | OPTICAL PARTICLE SENSOR | 19.05.2016 BR | BR 11 2018 073681 0 | BR112018073681-0 | | National Procedure |
| 2016PF00121 | 2016P00121WOCN | OPTICAL PARTICLE SENSOR | 19.05.2016 CN | 201780030808.7 | CN 109154552 A | | National Procedure |
| 2016PF00537 | 2016P00537WE | LASER SENSOR FOR PARTICLE DETECTION | 19.05.2016 | 17722675.5 | EP3458874 | | EPC Procedure |
| 2016PF00537 | 2016P00537WOUS | LASER SENSOR FOR PARTICLE DETECTION | 19.05.2016 US | 16/300617 | | | National Procedure |
| 2016PF00537 | 2016P00537WORU | LASER SENSOR FOR PARTICLE DETECTION | 19.05.2016 RU | PCT/EP2017/061422 | | | National Procedure |
| 2016PF00537 | 2016P00537WOCN | LASER SENSOR FOR PARTICLE DETECTION | 19.05.2016 CN | 201780030794.6 | CN 109154659 A | | National Procedure |
| 2016PF00537 | 2016P00537WOJP | LASER SENSOR FOR PARTICLE DETECTION | 19.05.2016 JP | 2018-560079 | | | National Procedure |
| 2016PF00537 | 2016P00537WOBR | LASER SENSOR FOR PARTICLE DETECTION | 19.05.2016 BR | BR 11 2018 073451 4 | | | National Procedure |
| 2016PF00537 | 2016P00537WOIN | LASER SENSOR FOR PARTICLE DETECTION | 19.05.2016 IN | 201847045574 | | | National Procedure |
| 2016PF01328 | 2016P01328WO | LASER SENSOR MODULE FOR PARTICLE DENSITY DETECTION | 09.12.2016 | PCT/EP2017/081090 | WO2018108154 | | PCT Procedure - Completed |
| 2016PF01328 | 2016P01328WOCN | LASER SENSOR MODULE FOR PARTICLE DENSITY DETECTION | 09.12.2016 CN | PCT/EP2017/081090 | | | National Procedure - Preparation of Filing Documents |
| 2016PF01328 | 2016P01328WOKR | LASER SENSOR MODULE FOR PARTICLE DENSITY DETECTION | 09.12.2016 KR | PCT/EP2017/081090 | | | National Procedure - Preparation of Filing Documents |
| 2016PF01328 | 2016P01328WE | LASER SENSOR MODULE FOR PARTICLE DENSITY DETECTION | 09.12.2016 | PCT/EP2017/081090 | | | EPC Procedure - Preparation of Filing Documents |
| 2016PF01328 | 2016P01328WOJP | LASER SENSOR MODULE FOR PARTICLE DENSITY DETECTION | 09.12.2016 JP | PCT/EP2017/081090 | | | National Procedure - Preparation of Filing Documents |
| 2016PF01328 | 2016P01328WOIN | LASER SENSOR MODULE FOR PARTICLE DENSITY DETECTION | 09.12.2016 IN | PCT/EP2017/081090 | | | National Procedure - Preparation of Filing Documents |
| 2016PF01328 | 2016P01328WOUS | LASER SENSOR MODULE FOR PARTICLE DENSITY DETECTION | 09.12.2016 US | PCT/EP2017/081090 | | | National Procedure - Preparation of Filing Documents |
| 2016PF01328 | 2016P01328WOBR | LASER SENSOR MODULE FOR PARTICLE DENSITY DETECTION | 09.12.2016 BR | PCT/EP2017/081090 | | | National Procedure - Preparation of Filing Documents |
| 2016PF01329 | 2016P01329WOJP | OPTICAL PARTICLE SENSOR MODULE | 09.12.2016 JP | PCT/EP2017/081088 | | | National Procedure - Preparation of Filing Documents |
| 2016PF01329 | 2016P01329WOCN | OPTICAL PARTICLE SENSOR MODULE | 09.12.2016 CN | PCT/EP2017/081088 | | | National Procedure - Preparation of Filing Documents |
| 2016PF01329 | 2016P01329WOIN | OPTICAL PARTICLE SENSOR MODULE | 09.12.2016 IN | PCT/EP2017/081088 | | | National Procedure - Preparation of Filing Documents |
| 2016PF01329 | 2016P01329WOBR | OPTICAL PARTICLE SENSOR MODULE | 09.12.2016 BR | PCT/EP2017/081088 | | | National Procedure - Preparation of Filing Documents |



PATENT
REEL: 052114 FRAME: 0385

# Transfer Patent Rights (prepared for Trumpf)
## Annex A-1



| | | | | | | |
|---|---|---|---|---|---|---|
| 2016PF01329 | 2016P01329WORU | OPTICAL PARTICLE SENSOR MODULE | 09.12.2016 RU | PCT/EP2017/081088 | | National Procedure - Preparation of Filing Documents |
| 2016PF01329 | 2016P01329WO | OPTICAL PARTICLE SENSOR MODULE | 09.12.2016 | PCT/EP2017/081088 | WO2018104153 | PCT Procedure - Completed |
| 2016PF01329 | 2016P01329WOUS | OPTICAL PARTICLE SENSOR MODULE | 05.12.2016 US | PCT/EP2017/081088 | | National Procedure - Preparation of Filing Documents |
| 2016PF01329 | 2016P01329WE | OPTICAL PARTICLE SENSOR MODULE | 05.12.2016 | PCT/EP2017/081088 | | EPC Procedure - Preparation of Filing Documents |
| 2017PF01492 | 2017P01492WO | METHOD OF DETERMINING OPERATION CONDITIONS OF A LASER-BASED PARTICLE DETECTOR | 02.03.2017 | PCT/EP2018/054853 | WO2018158276 | PCT Procedure - Completed |
| 2017PF01492 | 2017P01492EP | Procedure for high-speed-on-chip operation of a VCSEL based particle sensor | 02.03.2017 | 17158808.0 | EP3370311 | EPC Procedure |
| 2017PF01492 | 2017P01492WOJP | METHOD OF DETERMINING OPERATION CONDITIONS OF A LASER-BASED PARTICLE DETECTOR | 02.03.2017 JP | PCT/EP2018/054853 | | National Procedure - Preparation of Filing Documents |
| 2017PF01492 | 2017P01492WOUS | METHOD OF DETERMINING OPERATION CONDITIONS OF A LASER-BASED PARTICLE DETECTOR | 02.03.2017 US | PCT/EP2018/054853 | | National Procedure - Preparation of Filing Documents |
| 2017PF01492 | 2017P01492WOIN | METHOD OF DETERMINING OPERATION CONDITIONS OF A LASER-BASED PARTICLE DETECTOR | 02.03.2017 IN | PCT/EP2018/054853 | | National Procedure - Preparation of Filing Documents |
| 2017PF01492 | 2017P01492WOCN | METHOD OF DETERMINING OPERATION CONDITIONS OF A LASER-BASED PARTICLE DETECTOR | 02.03.2017 CN | PCT/EP2018/054853 | | National Procedure - Preparation of Filing Documents |
| 2017PF01492 | 2017P01492WE | METHOD OF DETERMINING OPERATION CONDITIONS OF A LASER-BASED PARTICLE DETECTOR | 02.03.2017 | PCT/EP2018/054853 | | EPC Procedure - Preparation of Filing Documents |
| 2017PF01492 | 2017P01492WOKR | METHOD OF DETERMINING OPERATION CONDITIONS OF A LASER-BASED PARTICLE DETECTOR | 02.03.2017 KR | PCT/EP2018/054853 | | National Procedure - Preparation of Filing Documents |
| 2017PF01492 | 2017P01492WOBR | METHOD OF DETERMINING OPERATION CONDITIONS OF A LASER-BASED PARTICLE DETECTOR | 02.03.2017 BR | PCT/EP2018/054853 | | National Procedure - Preparation of Filing Documents |
| 2017PF01493 | 2017P01493WOUS | LASER SENSOR MODULE FOR PARTICLE DETECTION WITH OFFSET BEAM | 15.03.2017 US | PCT/EP2018/055524 | | National Procedure - Preparation of Filing Documents |
| 2017PF01493 | 2017P01493WOJP | LASER SENSOR MODULE FOR PARTICLE DETECTION WITH OFFSET BEAM | 15.03.2017 JP | PCT/EP2018/055524 | | National Procedure - Preparation of Filing Documents |
| 2017PF01493 | 2017P01493WOIN | LASER SENSOR MODULE FOR PARTICLE DETECTION WITH OFFSET BEAM | 15.03.2017 IN | PCT/EP2018/055524 | | National Procedure - Preparation of Filing Documents |
| 2017PF01493 | 2017P01493WE | LASER SENSOR MODULE FOR PARTICLE DETECTION WITH OFFSET BEAM | 15.03.2017 | PCT/EP2018/055524 | | EPC Procedure - Preparation of Filing Documents |
| 2017PF01493 | 2017P01493WO | LASER SENSOR MODULE FOR PARTICLE DETECTION WITH OFFSET BEAM | 15.03.2017 | PCT/EP2018/055524 | WO2018166851 | PCT Procedure - Completed |
| 2017PF01493 | 2017P01493WOBR | LASER SENSOR MODULE FOR PARTICLE DETECTION WITH OFFSET BEAM | 15.03.2017 BR | PCT/EP2018/055524 | | National Procedure - Preparation of Filing Documents |
| 2017PF01493 | 2017P01493EP | Beam Offset on mirror to have increased sensitivity for particle detection with SMI | 15.03.2017 | 17160985.2 | EP3376204 | EPC Procedure |
| 2017PF01493 | 2017P01493WOKR | LASER SENSOR MODULE FOR PARTICLE DETECTION WITH OFFSET BEAM | 15.03.2017 KR | PCT/EP2018/055524 | | National Procedure - Preparation of Filing Documents |
| 2017PF01493 | 2017P01493WOCN | LASER SENSOR MODULE FOR PARTICLE DETECTION WITH OFFSET BEAM | 15.03.2017 CN | PCT/EP2018/055524 | | National Procedure - Preparation of Filing Documents |
| 2017PF01494 | 2017P01494WOUS | INHERENTLY SAFE LASER ARRANGEMENT COMPRISING A VERTICAL CAVITY SURFACE EMITTING LASER | 31.03.2017 US | PCT/EP2018/058274 | | National Procedure - Preparation of Filing Documents |
| 2017PF01494 | 2017P01494WOBR | INHERENTLY SAFE LASER ARRANGEMENT COMPRISING A VERTICAL CAVITY SURFACE EMITTING LASER | 31.03.2017 BR | PCT/EP2018/058274 | | National Procedure - Preparation of Filing Documents |
| 2017PF01494 | 2017P01494WOIN | INHERENTLY SAFE LASER ARRANGEMENT COMPRISING A VERTICAL CAVITY SURFACE EMITTING LASER | 31.03.2017 IN | PCT/EP2018/058274 | | National Procedure - Preparation of Filing Documents |
| 2017PF01494 | 2017P01494WOJP | INHERENTLY SAFE LASER ARRANGEMENT COMPRISING A VERTICAL CAVITY SURFACE EMITTING LASER | 31.03.2017 JP | PCT/EP2018/058274 | | National Procedure - Preparation of Filing Documents |
| 2017PF01494 | 2017P01494EP | Inherently safe VCSEL array | 31.03.2017 | 17164121.0 | EP3382828 | EPC Procedure |
| 2017PF01494 | 2017P01494WOKR | INHERENTLY SAFE LASER ARRANGEMENT COMPRISING A VERTICAL CAVITY SURFACE EMITTING LASER | 31.03.2017 KR | PCT/EP2018/058274 | | National Procedure - Preparation of Filing Documents |
| 2017PF01494 | 2017P01494WO | INHERENTLY SAFE LASER ARRANGEMENT COMPRISING A VERTICAL CAVITY SURFACE EMITTING LASER | 31.03.2017 | PCT/EP2018/058274 | WO2018178328 | PCT Procedure - Completed |
| 2017PF01494 | 2017P01494WE | INHERENTLY SAFE LASER ARRANGEMENT COMPRISING A VERTICAL CAVITY SURFACE EMITTING LASER | 31.03.2017 | PCT/EP2018/058274 | | EPC Procedure - Preparation of Filing Documents |
| 2017PF01494 | 2017P01494WOCN | INHERENTLY SAFE LASER ARRANGEMENT COMPRISING A VERTICAL CAVITY SURFACE EMITTING LASER | 31.03.2017 CN | PCT/EP2018/058274 | | National Procedure - Preparation of Filing Documents |
| 2017PF01494 | 2017P01494WORU | INHERENTLY SAFE LASER ARRANGEMENT COMPRISING A VERTICAL CAVITY SURFACE EMITTING LASER | 31.03.2017 RU | PCT/EP2018/058274 | | National Procedure - Preparation of Filing Documents |
| 2017PF01634 | 2017P01634WORU | METHOD OF SUPPRESSING FALSE POSITIVE SIGNALS DURING SELF MIXING INTERFERENCE PARTICLE DETECTION | 12.05.2017 RU | PCT/EP2018/061638 | | National Procedure - Preparation of Filing Documents |
| 2017PF01634 | 2017P01634WOCN | METHOD OF SUPPRESSING FALSE POSITIVE SIGNALS DURING SELF MIXING INTERFERENCE PARTICLE DETECTION | 12.05.2017 CN | PCT/EP2018/061638 | | National Procedure - Preparation of Filing Documents |
| 2017PF01634 | 2017P01634WOBR | METHOD OF SUPPRESSING FALSE POSITIVE SIGNALS DURING SELF MIXING INTERFERENCE PARTICLE DETECTION | 12.05.2017 BR | PCT/EP2018/061638 | | National Procedure - Preparation of Filing Documents |
| 2017PF01634 | 2017P01634WOUS | METHOD OF SUPPRESSING FALSE POSITIVE SIGNALS DURING SELF MIXING INTERFERENCE PARTICLE DETECTION | 12.05.2017 US | PCT/EP2018/061638 | | National Procedure - Preparation of Filing Documents |
| 2017PF01634 | 2017P01634WO | METHOD OF SUPPRESSING FALSE POSITIVE SIGNALS DURING SELF MIXING INTERFERENCE PARTICLE DETECTION | 12.05.2017 | PCT/EP2018/061638 | WO2018206476 | PCT Procedure - Completed |
| 2017PF01634 | 2017P01634WOJP | METHOD OF SUPPRESSING FALSE POSITIVE SIGNALS DURING SELF MIXING INTERFERENCE PARTICLE DETECTION | 12.05.2017 JP | PCT/EP2018/061638 | | National Procedure - Preparation of Filing Documents |
| 2017PF01634 | 2017P01634WE | METHOD OF SUPPRESSING FALSE POSITIVE SIGNALS DURING SELF MIXING INTERFERENCE PARTICLE DETECTION | 12.05.2017 | PCT/EP2018/061638 | | EPC Procedure - Preparation of Filing Documents |
| 2017PF01634 | 2017P01634WOIN | METHOD OF SUPPRESSING FALSE POSITIVE SIGNALS DURING SELF MIXING INTERFERENCE PARTICLE DETECTION | 12.05.2017 IN | PCT/EP2018/061638 | | National Procedure - Preparation of Filing Documents |
| 2017PF01634 | 2017P01634WOKR | METHOD OF SUPPRESSING FALSE POSITIVE SIGNALS DURING SELF MIXING INTERFERENCE PARTICLE DETECTION | 12.05.2017 KR | PCT/EP2018/061638 | | National Procedure - Preparation of Filing Documents |
| 2017PF01797 | 2017P01797WOBR | VERTICAL CAVITY SURFACE EMITTING LASER (VCSEL) WITH IMPROVED GAIN-SWITCHING BEHAVIOR | 22.06.2017 BR | PCT/EP2018/065747 | | National Procedure - Preparation of Filing Documents |
| 2017PF01797 | 2017P01797WOIN | VERTICAL CAVITY SURFACE EMITTING LASER (VCSEL) WITH IMPROVED GAIN-SWITCHING BEHAVIOR | 22.06.2017 IN | PCT/EP2018/065747 | | National Procedure - Preparation of Filing Documents |
| 2017PF01797 | 2017P01797WOCN | VERTICAL CAVITY SURFACE EMITTING LASER (VCSEL) WITH IMPROVED GAIN-SWITCHING BEHAVIOR | 22.06.2017 CN | PCT/EP2018/065747 | | National Procedure - Preparation of Filing Documents |
| 2017PF01797 | 2017P01797WOUS | VERTICAL CAVITY SURFACE EMITTING LASER (VCSEL) WITH IMPROVED GAIN-SWITCHING BEHAVIOR | 22.06.2017 US | PCT/EP2018/065747 | | National Procedure - Preparation of Filing Documents |
| 2017PF01797 | 2017P01797WO | VERTICAL CAVITY SURFACE EMITTING LASER (VCSEL) WITH IMPROVED GAIN-SWITCHING BEHAVIOR | 22.06.2017 | PCT/EP2018/065747 | WO2018234131 | PCT Procedure - Completed |
| 2017PF01797 | 2017P01797WORU | VERTICAL CAVITY SURFACE EMITTING LASER (VCSEL) WITH IMPROVED GAIN-SWITCHING BEHAVIOR | 22.06.2017 RU | PCT/EP2018/065747 | | National Procedure - Preparation of Filing Documents |
| 2017PF01797 | 2017P01797WOJP | VERTICAL CAVITY SURFACE EMITTING LASER (VCSEL) WITH IMPROVED GAIN-SWITCHING BEHAVIOR | 22.06.2017 JP | PCT/EP2018/065747 | | National Procedure - Preparation of Filing Documents |
| 2017PF01797 | 2017P01797WOKR | VERTICAL CAVITY SURFACE EMITTING LASER (VCSEL) WITH IMPROVED GAIN-SWITCHING BEHAVIOR | 22.06.2017 KR | PCT/EP2018/065747 | | National Procedure - Preparation of Filing Documents |
| 2017PF01797 | 2017P01797WE | VERTICAL CAVITY SURFACE EMITTING LASER (VCSEL) WITH IMPROVED GAIN-SWITCHING BEHAVIOR | 22.06.2017 | PCT/EP2018/065747 | | EPC Procedure - Preparation of Filing Documents |
| 2017PF01855 | 2017P01855WOCN | DISPLAY APPARATUS FOR COMPUTER-MEDIATED REALITY | 28.06.2017 CN | PCT/EP2018/067152 | | National Procedure - Preparation of Filing Documents |
| 2017PF01855 | 2017P01855WO | DISPLAY APPARATUS FOR COMPUTER-MEDIATED REALITY | 28.06.2017 | PCT/EP2018/067152 | WO2019002316 | PCT Procedure - Completed |
| 2017PF01855 | 2017P01855WOBR | DISPLAY APPARATUS FOR COMPUTER-MEDIATED REALITY | 28.06.2017 BR | PCT/EP2018/067152 | | National Procedure - Preparation of Filing Documents |
| 2017PF01855 | 2017P01855WE | DISPLAY APPARATUS FOR COMPUTER-MEDIATED REALITY | 28.06.2017 | PCT/EP2018/067152 | | EPC Procedure - Preparation of Filing Documents |
| 2017PF01855 | 2017P01855WOIN | DISPLAY APPARATUS FOR COMPUTER-MEDIATED REALITY | 28.06.2017 IN | PCT/EP2018/067152 | | National Procedure - Preparation of Filing Documents |
| 2017PF01855 | 2017P01855WOUS | DISPLAY APPARATUS FOR COMPUTER-MEDIATED REALITY | 28.06.2017 US | PCT/EP2018/067152 | | National Procedure - Preparation of Filing Documents |
| 2017PF01855 | 2017P01855WOKR | DISPLAY APPARATUS FOR COMPUTER-MEDIATED REALITY | 28.06.2017 KR | PCT/EP2018/067152 | | National Procedure - Preparation of Filing Documents |
| 2017PF01855 | 2017P01855WOJP | DISPLAY APPARATUS FOR COMPUTER-MEDIATED REALITY | 28.06.2017 JP | PCT/EP2018/067152 | | National Procedure - Preparation of Filing Documents |
| 2017PF01855 | 2017P01855WORU | DISPLAY APPARATUS FOR COMPUTER-MEDIATED REALITY | 28.06.2017 RU | PCT/EP2018/067152 | | National Procedure - Preparation of Filing Documents |
| 2017PF01918 | 2017P01918WO | VCSEL ARRAY WITH COMMON WAFER LEVEL INTEGRATED OPTICAL DEVICE | 28.06.2017 | PCT/EP2018/067767 | WO2019038365 | PCT Procedure - Chapter I |
| 2017PF01930 | 2017P01930EP | Low RMS VCSEL with Pentagonal Mesa Shape | 27.10.2017 | 17198760.9 | | EPC Procedure |
| 2017PF02139 | 2017P02139WO | Time-of-flight depth camera with low resolution pixel imaging | 01.08.2017 | PCT/EP2018/073219 | | PCT Procedure - Chapter I |
| 2017PF02179 | 2017P02179EP | Transistor VCSEL with Stable optical response | 23.11.2017 | 17203383.8 | | EPC Procedure |
| 2017PF02179 | 2017P02179WO | VERTICAL CAVITY SURFACE EMITTING LASER | 23.11.2017 | PCT/EP2018/082251 | | PCT Procedure - Chapter I |
| 2017PF02232 | 2017P02232WO | Reduced illumination [illegible] safety for 3D sensing by use of wafer-level optic and a diffuser | 30.08.2017 | PCT/EP2018/073355 | WO2019043302 | PCT Procedure - Chapter I |
| 2017PF02510 | 2017P02510EP | Integrated VCSEL Damage Check | 19.10.2017 | 17197207.8 | | EPC Procedure |
| 2017PF02359 | 2017P02359EP | Polarization Detection Improved Sensing | 02.11.2017 | 17199866.5 | | EPC Procedure |
| 2017PF02359 | 2017P02359WO | POLARIZATION DETECTION IMPROVED SENSING | 02.11.2017 | PCT/EP2018/079774 | | PCT Procedure - Chapter I |
| 2017PF02409 | 2017P02409EP | Improved bond pad mask design | 30.11.2017 | 17204631.8 | | EPC Procedure |
| 2017PF02490 | 2017P02490 DE | SEGMENTED VERTICAL CAVITY SURFACE EMITTING LASER | 08.12.2017 DE | 10 2018 131 615.3 | | National Procedure |
| 2017PF02490 | 2017P02490EP | Segmented bottom emitting VCSEL | 08.12.2017 | 17206157.4 | | EPC Procedure |
| 2017PF02490 | 2017P02490 GB | SEGMENTED VERTICAL CAVITY SURFACE EMITTING LASER | 08.12.2017 GB | 1819958.1 | | National Procedure |
| 2017PF02490 | 2017P02490WO | SEGMENTED VERTICAL CAVITY SURFACE EMITTING LASER | 08.12.2017 | PCT/EP2018/083023 | | PCT Procedure - Chapter I |
| 2017PF02490 | 2017P02490 FR | SEGMENTED VERTICAL CAVITY SURFACE EMITTING LASER | 08.12.2017 FR | 18 72520 | | National Procedure |
| 2017PF02491 | 2017P02491WO | ENERGY EFFICIENT LASER ARRANGEMENT | 15.10.2018 | PCT/EP2018/078021 | | PCT Procedure - Chapter I |
| 2017PF02491 | 2017P02491EP | Improved Diffuser for TOF Cameras | 05.01.2018 | 18150803.7 | | EPC Procedure |
| 2017PF02492 | 2017P02492WO | Light Source and Optical Filter or Optical Amplifier for TOF sensors | 05.01.2018 | PCT/EP2019/050503 | | PCT Procedure - Chapter I |
| 2017PF02492 | 2017P02492EP | Light Source and Optical Filter or Optical Amplifier for TOF sensors | 05.01.2018 | 18150802.7 | | EPC Procedure |
| 2017PF02561 | 2017P02561WO | VERTICAL CAVITY SURFACE EMITTING LASER DEVICE WITH INTEGRATED PHOTODIODE | 15.01.2018 | PCT/EP2019/050580 | | PCT Procedure - Chapter I |
| 2017PF02561 | 2017P02561EP | Improved VCSEL with Intra Cavity PD integrated in the Top DBR for Volume Production | 15.01.2018 | 18151849.7 | | EPC Procedure |
| 2017PF02600 | 2017P02600WO | TIME OF FLIGHT IMAGING SYSTEM FOR AUTONOMOUS MOVABLE OBJECTS | 19.01.2018 | PCT/EP2019/050373 | | PCT Procedure - Chapter I |



PATENT
REEL: 052114 FRAME: 0386

# Transfer Patent Rights (prepared for Trumpf)

## Annex A-1



| | | | | | |
|---|---|---|---|---|---|
| 2017P02200 | 2017P02200EP | TIME-OF-FLIGHT RANGING SYSTEM FOR AUTONOMOUS MOVABLE OBJECTS | | | |
| 2018P00014 | 2018P00014EP | Waterlevel optic for structured light pattern. | 19.01.2018 | 18152471.1 | EPC Procedure |
| 2018P00014 | 2018P00014WO | Water-level optic for structured light pattern | 24.01.2018 | 18152119.5 | EPC Procedure |
| 2018P00054 | 2018P00064 GB | Optimized position for a tunnel-junction in the DBR of a VCSEL | 24.01.2018 | PCT/EP2018/050703 | PCT Procedure - Chapter I |
| 2018P00054 | 2018P00064 DE | Optimized position for a tunnel-junction in the DBR of a VCSEL | 15.05.2018 GB | | National Procedure - Preparation of Filing Documents |
| 2018P00054 | 2018P00064EP | Optimized position for a tunnel-junction in the DBR of a VCSEL. | 15.05.2018 DE | | National Procedure - Preparation of Filing Documents |
| 2018P00054 | 2018P00064WO | Optimized position for a tunnel-junction in the DBR of a VCSEL. | 15.03.2018 | 18159874.8 | EPC Procedure |
| 2018P00054 | 2018P00064 FR | Optimized position for a tunnel-junction in the DBR of a VCSEL | 15.03.2018 | | PCT Procedure - Preparation of Filing Documents |
| 2018P00058 | 2018P00138WO | Frequency Modulated VCSEL with Electro-Optical Modulator (EOM) | 15.03.2018 FR | | National Procedure - Preparation of Filing Documents |
| 2018P00058 | 2018P00138EP | Frequency Modulated VCSEL with Electro-Optical Modulator (EOM) | 26.06.2018 | | PCT Procedure - Preparation of Filing Documents |
| 2018P00060 | 2018P00340EP | Diffuser with low speckle contrast | 25.06.2018 | 18180800.7 | EPC Procedure |
| 2018P00075 | 2018P00275EP | Finger print detection for an SAW particle sensor using vibration | 25.04.2018 | 18169272.4 | EPC Procedure |
| 2018P00075 | 2018P00275WO | Finger print detection for an SAW particle sensor using vibration | 23.06.2018 | 18179000.8 | EPC Procedure |
| 2018P00087 | 2018P00022EP | VCSEL Array with integrated optics for TOF sensors optimized for small pulse delay | 25.06.2018 | | PCT Procedure - Preparation of Filing Documents |
| 2018P00088 | 2018P00088EP | Improved Diffuser for VCSEL Arrays | 26.06.2018 | 18179880.5 | EPC Procedure |
| 2018P00089 | 2018P00089EP | VCSEL Array with Integrated Photodiode for 3D Sensing. | 17.07.2018 | 18183882.7 | EPC Procedure |
| 2018P00089 | 2018P00089WO | VCSEL Array with Integrated Photodiode for 3D Sensing. | 26.06.2018 | 18179890.4 | EPC Procedure |
| 2018P00097 | 2018P00037EP | HS modulation to prevent false signals from obstruction | 26.06.2018 | | PCT Procedure - Preparation of Filing Documents |
| 2018P00098 | 2018P00098EP | VCSEL Lifetime increase by best mesa Selection | 25.06.2018 | 18180810.6 | EPC Procedure |
| 2018P00767 | 2018P00767 DE | Optische Linse für eine photoelektronische Vorrichtung | 08.11.2018 | 102018007.1 | EPC Procedure |
| 2018P00768 | 2018P00768 DE | Verfahren und Vorrichtung zur Überwachung der optischen Ausgangsleistung einer laserdiode mit einer angeschlossenen Faserdiode und Kopplung | 17.08.2018 DE | 102018214026.4 | National Procedure |
| 2018P00768 | 2018P00768 DE | Verfahren zum Betreiben eines Halbleiterlasers einer laserdiode mit einer zugeordneten Kopplungsvorrichtung und Überwachen der Betrie | 30.07.2018 DE | 102018212887.9 | National Procedure |
| 2018P00770 | 2018P00770 DE | Optische Partikelsensorvorrichtung und Verfahren zum Betreiben einer optischen Partikelsensorvorrichtung | 30.07.2018 DE | 102018212588.5 | National Procedure |
| 2018P00784 | 2018P00784 DE | Optische Partikelsensorvorrichtung und entsprechendes Partikelsensorverfahren | 17.08.2018 DE | 102018213632.6 | National Procedure |
| 2018P00785 | 2018P00785 DE | Gerät mit zeitlebensfern einer thermischen Abdeckung | 30.07.2018 DE | 102018214060.2 | National Procedure |
| 2018P00786 | 2018P00786 DE | Produkt mit qualitätsverbesserungsvorrichtung [illegible] | 05.06.2018 DE | 102018208781.4 | National Procedure |
| 2018P00830 | 2018P00830 DE | Sensorvorrichtung und Verfahren zum Betreiben einer Gerät einer Photo | 17.08.2018 DE | 102018213223.7 | National Procedure |
| 2018P00925 | 2018P00925 DE | Patchbeam- und Patch-Antennenvorrichtung und entsprechendes Verfahren, sowie Sensor- und Partikelsensorsystem | 03.09.2018 DE | 102018214932.1 | National Procedure |
| 2018P01054 | 2018P01054 DE | Portable optische Partikelsensorvorrichtung und entsprechendes Partikelmessverfahren | 08.09.2018 DE | 102018215177.6 | National Procedure |
| 2018P01055 | 2018P01055 DE | Optische Brandsensorvorrichtung und entsprechendes Brandsensorverfahren | 08.09.2018 DE | 102018214636.6 | National Procedure |
| 2018P01064 | 2018P01064 DE | System und Verfahren zur Bestimmen elektrischer Belastung | 02.10.2018 DE | 102018218908.8 | National Procedure |
| 2018P01064 | 2018P01064EP | Integrierte Stromlieferanordnung in einem optischen Komponenten auf Gaas-basis | 26.10.2018 DE | 102018218376.5 | National Procedure |
| 2018P01118 | 2018P01118 DE | Abtastvorrichtung und Abtastverfahren für eine verschiebbar zu einem mindestens teilweise auftretende Störung | 28.03.2018 | 18159255.7 | EPC Procedure |
| 2018P00039 | 2018P00039 DE | Velocity Reconstruction for Quasi-Orthogonal SAW-based Particle Measurement Sensor - SP SPSS | 14.03.2018 DE | 102018204034.0 | National Procedure |
| 2018P00040 | 2018P00040 DE | Focus Flow Cytology - SP SPSS | 20.12.2018 DE | 102018222590.7 | National Procedure |
| | | | 20.12.2018 DE | 102018220000.7 | National Procedure |



PATENT
REEL: 052114 FRAME: 0387

# Transfer Patent Rights (prepared for Trumpf)
## Annex A-2



| Family / Internal file number | Internal file number | Title | Priority date | Country code | Application number | Publication number | Grant number | Workflow status |
|---|---|---|---|---|---|---|---|---|
| 2008PF00166 | 2008P00166WEGB | Speed over ground sensor for a very large speed range. | 16.01.2008 | GB | 09702478.0 | EP 2243042 A | 2243042 | National Procedure - Granted after Opposition Period |
| 2008PF00166 | 2008P00166WEFR | Speed over ground sensor for a very large speed range. | 16.01.2008 | FR | 09702478.0 | EP 2243042 A | 2243042 | National Procedure - Granted after Opposition Period |
| 2008PF00166 | 2008P00166WOKR | Speed over ground sensor for a very large speed range. | 16.01.2008 | KR | 10-2010-7018063 | | 10-1644476 | National Procedure - Granted |
| 2008PF00166 | 2008P00166WOUS | Speed over ground sensor for a very large speed range. | 16.01.2008 | US | 12/812046 | US 20110007299 A1 | 8692975 | National Procedure - Granted |
| 2008PF00166 | 2008P00166WETR | Speed over ground sensor for a very large speed range. | 16.01.2008 | TR | 09702478.0 | EP 2243042 A | 2243042 | National Procedure - Granted after Opposition Period |
| 2008PF00166 | 2008P00166WOJP | Speed over ground sensor for a very large speed range. | 16.01.2008 | JP | 10-542712 | | 5575294 | National Procedure - Granted |
| 2008PF00166 | 2008P00166WOCN | Speed over ground sensor for a very large speed range. | 16.01.2008 | CN | 200980102445.8 | CN 101910867 A | 200980102445.8 | National Procedure - Granted |
| 2008PF00166 | 2008P00166WEDE | Speed over ground sensor for a very large speed range. | 16.01.2008 | DE | 09702478.0 | EP 2243042 A | 60 2009 035 145.9 | National Procedure - Granted after Opposition Period |
| 2008PF00563 | 2008P00563WOKR | Detection of automotive road condition | 13.03.2008 | KR | 10-2010-7022853 | | 10-1562976 | National Procedure - Granted |
| 2008PF00563 | 2008P00563WOJP | Detection of automotive road condition | 13.03.2008 | JP | 10-550308 | | 5631748 | National Procedure - Granted |
| 2008PF00563 | 2008P00563WEDE | Detection of automotive road condition | 13.03.2008 | DE | 09720518.4 | EP 2257454 A | 60 2009 015 727.5 | National Procedure - Granted after Opposition Period |
| 2008PF00563 | 2008P00563WEFR | Detection of automotive road condition | 13.03.2008 | FR | 09720518.4 | EP 2257454 A | 2257454 | National Procedure - Granted after Opposition Period |
| 2008PF00563 | 2008P00563WOUS | Detection of automotive road condition | 13.03.2008 | US | 12/919257 | US 20110000092 A1 | 8751091 | National Procedure - Granted |
| 2008PF00563 | 2008P00563WOCN | Detection of automotive road condition | 13.03.2008 | CN | 200980108754.6 | CN 101970274 A | 200980108754.6 | National Procedure - Granted |
| 2008PF00563 | 2008P00563WEGB | Detection of automotive road condition | 13.03.2008 | GB | 09720518.4 | EP 2257454 A | 2257454 | National Procedure - Granted after Opposition Period |
| 2008PF00876 | 2008P00876WOKR | A Self-mixing Laser Device as an Occupant-targeted Automotive Airbag Trigger Sensor | 16.05.2008 | KR | 10-2010-7025393 | | 10-1551440 | National Procedure - Granted |
| 2008PF00876 | 2008P00876WEIT | A Self-mixing Laser Device as an Occupant-targeted Automotive Airbag Trigger Sensor | 16.05.2008 | IT | 09746207.1 | EP 2280848 A | 2280848 | National Procedure - Granted after Opposition Period |
| 2008PF00876 | 2008P00876WEDE | A Self-mixing Laser Device as an Occupant-targeted Automotive Airbag Trigger Sensor | 16.05.2008 | DE | 09746207.1 | EP 2280848 A | 60 2009 024 766.2 | National Procedure - Granted after Opposition Period |
| 2008PF00876 | 2008P00876WEFR | A Self-mixing Laser Device as an Occupant-targeted Automotive Airbag Trigger Sensor | 16.05.2008 | FR | 09746207.1 | EP 2280848 A | 2280848 | National Procedure - Granted after Opposition Period |
| 2008PF00876 | 2008P00876WEGB | A Self-mixing Laser Device as an Occupant-targeted Automotive Airbag Trigger Sensor | 16.05.2008 | GB | 09746207.1 | EP 2280848 A | 2280848 | National Procedure - Granted after Opposition Period |
| 2008PF00876 | 2008P00876WOJP | A Self-mixing Laser Device as an Occupant-targeted Automotive Airbag Trigger Sensor | 16.05.2008 | JP | 11-509055 | | 5734868 | National Procedure - Granted |
| 2008PF00876 | 2008P00876WOUS | A Self-mixing Laser Device as an Occupant-targeted Automotive Airbag Trigger Sensor | 16.05.2008 | US | 12/992100 | US 20110118843 A1 | 8781687 | National Procedure - Granted |
| 2008PF00876 | 2008P00876WOCN | A Self-mixing Laser Device as an Occupant-targeted Automotive Airbag Trigger Sensor | 16.05.2008 | CN | 200980117783.X | CN 102026850 A | 200980117783.X | National Procedure - Granted |
| 2008PF01045 | 2008P01045WEGB | Automotive speed over ground sensor with indication of confidence | 08.08.2008 | GB | 09787112.3 | EP 2335080 A | 2335080 | National Procedure - Granted after Opposition Period |
| 2008PF01045 | 2008P01045WOJP | Automotive speed over ground sensor with indication of confidence | 08.08.2008 | JP | 2011-523670 | | 5458100 | National Procedure - Granted |
| 2008PF01045 | 2008P01045 CN | Automotive speed over ground sensor with indication of confidence | 08.08.2008 | CN | 201610892736.9 | | | National Procedure |
| 2008PF01045 | 2008P01045WEES | Automotive speed over ground sensor with indication of confidence | 08.08.2008 | ES | 09787112.3 | EP 2335080 A | 2335080 | National Procedure - Granted after Opposition Period |
| 2008PF01045 | 2008P01045WEIT | Automotive speed over ground sensor with indication of confidence | 08.08.2008 | IT | 09787112.3 | EP 2335080 A | 2335080 | National Procedure - Granted after Opposition Period |
| 2008PF01045 | 2008P01045WEDE | Automotive speed over ground sensor with indication of confidence | 08.08.2008 | DE | 09787112.3 | EP 2335080 A | 602009007374.5 | National Procedure - Granted after Opposition Period |
| 2008PF01045 | 2008P01045WOCN | Automotive speed over ground sensor with indication of confidence | 08.08.2008 | CN | 200980135210.9 | CN 102150045 A | | National Procedure |
| 2008PF01045 | 2008P01045WOUS | Automotive speed over ground sensor with indication of confidence | 08.08.2008 | US | 13/061787 | US 20110160967 A1 | 9566160 | National Procedure - Granted |
| 2008PF01045 | 2008P01045WOKR | Automotive speed over ground sensor with indication of confidence | 08.08.2008 | KR | 10-2011-7005105 | | 10-1659716 | National Procedure - Granted |
| 2008PF01045 | 2008P01045WEFR | Automotive speed over ground sensor with indication of confidence | 08.08.2008 | FR | 09787112.3 | EP 2335080 A | 2335080 | National Procedure - Granted after Opposition Period |
| 2009PF00003 | 2009P00003WOKR | Multi-axes SpoG sensor. | 26.01.2009 | KR | 10-2011-7019395 | | 10-1677754 | National Procedure - Granted |
| 2009PF00003 | 2009P00003WEGB | Multi-axes SpoG sensor. | 26.01.2009 | GB | 10701936.2 | EP 2389591 A | 2389591 | National Procedure - Granted after Opposition Period |
| 2009PF00003 | 2009P00003WOCN | Multi-axes SpoG sensor. | 26.01.2009 | CN | 201080004894.4 | CN 102252646 A | 201080004894.4 | National Procedure - Granted |
| 2009PF00003 | 2009P00003WEFR | Multi-axes SpoG sensor. | 26.01.2009 | FR | 10701936.2 | EP 2389591 A | 2389591 | National Procedure - Granted after Opposition Period |
| 2009PF00003 | 2009P00003WEDE | Multi-axes SpoG sensor. | 26.01.2009 | DE | 10701936.2 | EP 2389591 A | 60 2010 022 365.0 | National Procedure - Granted after Opposition Period |
| 2009PF00003 | 2009P00003WOUS | Multi-axes SpoG sensor. | 26.01.2009 | US | 13/145261 | US 20120016615 A1 | 9229024 | National Procedure - Granted |
| 2009PF00003 | 2009P00003WOJP | Multi-axes SpoG sensor. | 26.01.2009 | JP | 2011-545825 | | 5657569 | National Procedure - Granted |
| 2009PF00004 | 2009P00004WOJP | High frequency square wave modulation | 31.03.2009 | JP | 2012-502646 | | 5706872 | National Procedure - Granted |
| 2009PF00004 | 2009P00004WOKR | High frequency square wave modulation | 31.03.2009 | KR | 10-2011-7025659 | | 10-1751272 | National Procedure - Granted |
| 2009PF00004 | 2009P00004WEDE | High frequency square wave modulation | 31.03.2009 | DE | 10712981.5 | EP 2414917 A | 60 2010 042 652.1 | National Procedure - Granted after Opposition Period |
| 2009PF00004 | 2009P00004WEFR | High frequency square wave modulation | 31.03.2009 | FR | 10712981.5 | EP 2414917 A | EP2414917 | National Procedure - Granted after Opposition Period |
| 2009PF00004 | 2009P00004WOCA | High frequency square wave modulation | 31.03.2009 | CA | 2757043 | | 2757043 | National Procedure - Granted |
| 2009PF00004 | 2009P00004WOCN | High frequency square wave modulation | 31.03.2009 | CN | 201080014563.3 | CN 102378955 A | 201080014563.3 | National Procedure - Granted |
| 2009PF00004 | 2009P00004WOIN | High frequency square wave modulation | 31.03.2009 | IN | 7784/CHENP/2011 | | | National Procedure |
| 2009PF00004 | 2009P00004WOUS | High frequency square wave modulation | 31.03.2009 | US | 13/260747 | US 20120092675 A1 | 9013709 | National Procedure - Granted |
| 2009PF00004 | 2009P00004WEGB | High frequency square wave modulation | 31.03.2009 | GB | 10712981.5 | EP 2414917 A | EP2414917 | National Procedure - Granted after Opposition Period |
| 2009PF00454 | 2009P00454WOJP | A VCSEL based multiple-beam laser spot imaging system for characterization of vehicle dynamics | 29.04.2009 | JP | 2012-507858 | | 5690529 | National Procedure - Granted |
| 2009PF00454 | 2009P00454WOCN | A VCSEL based multiple-beam laser spot imaging system for characterization of vehicle dynamics | 29.04.2009 | CN | 201080018528.2 | CN 102422165 A | 201080018528.2 | National Procedure - Granted |
| 2009PF00454 | 2009P00454WEGB | A VCSEL based multiple-beam laser spot imaging system for characterization of vehicle dynamics | 29.04.2009 | GB | 10717809.7 | EP 2425261 A | 2425261 | National Procedure - Granted after Opposition Period |
| 2009PF00454 | 2009P00454WOUS | A VCSEL based multiple-beam laser spot imaging system for characterization of vehicle dynamics | 29.04.2009 | US | 13/318159 | US 20120044477 A1 | 8860689 | National Procedure - Granted |
| 2009PF00454 | 2009P00454WOKR | A VCSEL based multiple-beam laser spot imaging system for characterization of vehicle dynamics | 29.04.2009 | KR | 10-2011-7028585 | | 10-1734354 | National Procedure - Granted |
| 2009PF00454 | 2009P00454WEFR | A VCSEL based multiple-beam laser spot imaging system for characterization of vehicle dynamics | 29.04.2009 | FR | 10717809.7 | EP 2425261 A | 2425261 | National Procedure - Granted after Opposition Period |
| 2009PF00454 | 2009P00454 US | A VCSEL based multiple-beam laser spot imaging system for characterization of vehicle dynamics | 29.04.2009 | US | 13/784449 | | | National Procedure |
| 2009PF00454 | 2009P00454WETR | A VCSEL based multiple-beam laser spot imaging system for characterization of vehicle dynamics | 29.04.2009 | TR | 10717809.7 | EP 2425261 A | TR201506776T4 | National Procedure - Granted after Opposition Period |
| 2009PF00454 | 2009P00454WEDE | A VCSEL based multiple-beam laser spot imaging system for characterization of vehicle dynamics | 29.04.2009 | DE | 10717809.7 | EP 2425261 A | 60 2010 023 365.5 | National Procedure - Granted after Opposition Period |
| 2009PF00455 | 2009P00455WEDE | VCSEL based self-mixing laser sensors for simplified vehicle electronic stability program | 29.04.2009 | DE | 10717833.7 | EP 2425274 | 60 2010 046 835.5 | National Procedure - Granted after Opposition Period |
| 2009PF00455 | 2009P00455WOJP | VCSEL based self-mixing laser sensors for simplified vehicle electronic stability program | 29.04.2009 | JP | 2012-507861 | | 5694254 | National Procedure - Granted |
| 2009PF00455 | 2009P00455WEGB | VCSEL based self-mixing laser sensors for simplified vehicle electronic stability program | 29.04.2009 | GB | 10717833.7 | EP 2425274 | 2425274 | National Procedure - Granted after Opposition Period |
| 2009PF00455 | 2009P00455WEFR | VCSEL based self-mixing laser sensors for simplified vehicle electronic stability program | 29.04.2009 | FR | 10717833.7 | EP 2425274 | 2425274 | National Procedure - Granted after Opposition Period |
| 2009PF00455 | 2009P00455WOKR | VCSEL based self-mixing laser sensors for simplified vehicle electronic stability program | 29.04.2009 | KR | 10-2011-7028514 | | 10-1686646 | National Procedure - Granted |
| 2009PF00455 | 2009P00455WOUS | VCSEL based self-mixing laser sensors for simplified vehicle electronic stability program | 29.04.2009 | US | 13/318155 | US 20120053756 A1 | 8725310 | National Procedure - Granted |
| 2009PF00455 | 2009P00455WOCN | VCSEL based self-mixing laser sensors for simplified vehicle electronic stability program | 29.04.2009 | CN | 201080019175.7 | CN 102414576 A | 201080019175.7 | National Procedure - Granted |
| 2010PF00918 | 2010P00918WOJP | VELOCITY DETERMINATION APPARATUS | 03.11.2010 | JP | 2013-537236 | | 6006726 | National Procedure - Granted |
| 2010PF00918 | 2010P00918WEDE | VELOCITY DETERMINATION APPARATUS | 03.11.2010 | DE | 11797856.0 | EP 2635920 A | | National Procedure - Preparation of Filing Documents |
| 2010PF00918 | 2010P00918WEGB | VELOCITY DETERMINATION APPARATUS | 03.11.2010 | GB | 11797856.0 | EP 2635920 A | | National Procedure - Preparation of Filing Documents |
| 2010PF00918 | 2010P00918 TW | VELOCITY DETERMINATION APPARATUS | 03.11.2010 | TW | 100139959 | 201224482-A | I595251 | National Procedure - Granted |
| 2010PF00918 | 2010P00918WOCN | VELOCITY DETERMINATION APPARATUS | 03.11.2010 | CN | 201180052837.5 | CN 103180756 A | 201180052837.5 | National Procedure - Granted |
| 2010PF00918 | 2010P00918WOUS | VELOCITY DETERMINATION APPARATUS | 03.11.2010 | US | 13/883007 | US 20130226509 A1 | 9506944 | National Procedure - Granted |
| 2010PF00918 | 2010P00918WETR | VELOCITY DETERMINATION APPARATUS | 03.11.2010 | TR | 11797856.0 | EP 2635920 A | | National Procedure - Preparation of Filing Documents |
| 2010PF00918 | 2010P00918WEFR | VELOCITY DETERMINATION APPARATUS | 03.11.2010 | FR | 11797856.0 | EP 2635920 A | | National Procedure - Preparation of Filing Documents |



PATENT
REEL: 052114 FRAME: 0388

# Transfer Patent Rights (prepared for Trumpf)

## Annex A-2



| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 2010PF00938 | 2010PD00188WO0N | VELOCITY DETERMINATION APPARATUS | 08.11.2010 IN | 3542/CHENP/2013 | | | National Procedure |
| 2010PF00938 | 2010PD00188WO0R | VELOCITY DETERMINATION APPARATUS | 08.11.2010 BR | BR 11 2013 010567 0 | | | National Procedure |
| 2010PF00938 | 2010PD00188WO0RU | VELOCITY DETERMINATION APPARATUS | 08.11.2010 RU | 2013125482 | | 2595794 | National Procedure - Granted |
| 2010PF00938 | 2010PD00188WE | VELOCITY DETERMINATION APPARATUS | 08.11.2010 | 11767856.0 | EP 2535920 A | | EPC Procedure |



PATENT
REEL: 052114 FRAME: 0389

[redacted]

[redacted]