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Commissioner for Patents: Please record the attached original docume	nt(s) or copy(ies).		
Name of conveying party(ies):	2. Name and address of receiving party(ies):		
Osram Opto Semiconductors GmbH	OSRAM GmbH		
Additional name(s) attached? ☐ Yes ☒ No	Hellabrunner Strasse 1		
3. Nature of conveyance:	81536, Munich දු 🗘 📱		
 ☐ Assignment ☐ Merger ☐ Security Agreement ☐ Change of Name ☑ Other: Supplemental Confirmatory Assignment 	Germany 6211		
Execution Date: 12/09/2004	Additional names/addresses attached? ☐ Yes ☒ No		
Application number(s) or patent number(s):			
If this document is being filed with a new application, the execution	date of the application is: 02/02/2006		
A. Patent Application No(s).:	B: Patent No(s).:		
Additional numbers at	ached? ☐ Yes ☒ No		
Name/address of party to whom correspondence concerning document should be mailed:	6. Total number of applications/patents involved: 1		
MARC M. WEFERS	7. Total fee (37 CFR §3.41): \$40		
Fish & Richardson P.C.	☑ Enclosed		
225 Franklin Street Boston, MA 02110	☐ Authorized to charge Deposit Account.		
Boston, IVIA 02110	8. Deposit Account No.: 06-1050		
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Marc M. Wefers Reg. No. 56,842 Name of Person Signing Signature	2/1/06 Date		
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PATENT REEL: 017533 FRAME: 0509

Date of Deposit: February 2, 2006

SUPPLEMENTAL CONFIRMATORY ASSIGNMENT

The Effective Date of this Assignment is September 30, 2003.

WHEREAS, Osram Opto Semiconductors GmbH, a German corporation with headquarters located at Wernerwerkstrasse 2, 93049 Regensburg, Germany (hereinafter "ASSIGNOR"), was the owner of an interest in each patent application listed in Appendix A (the "PATENT APPLICATIONS");

WHEREAS, OSRAM GmBH, a German corporation with headquarters located at Hellabrunner Strasse 1, 81536, Munich, Germany, (hereinafter "ASSIGNEE"), was desirous of acquiring an interest in and to the PATENT APPLICATIONS, including any and all Letters Patent of the United States that may be obtained therefor;

NOW, THEREFORE, be it known that, pursuant to the terms of a contract entered into between ASSIGNOR and ASSIGNEE on September 30, 2003, for good and valuable consideration recited therein and paid by ASSIGNEE to ASSIGNOR, the receipt of which is hereby acknowledged, ASSIGNOR has sold, assigned and transferred, and by these presents does hereby confirm that, as of the Effective date, ASSIGNOR did sell, assign and transfer into ASSIGNEE, its legal representatives, successors and assigns, its entire right, title and interest in and to the PATENT APPLICATIONS, the same interest to be held by ASSIGNEE, its legal representatives, successors and assigns, to the full end of the term for which Letters Patent may be granted or may be reissued or extended, as fully and entirely as the same would have been held by ASSIGNOR had this assignment and sale not been made.

This confirmatory assignment supplements an earlier confirmatory assignment referencing the same September 30, 2003 contract. The earlier confirmatory assignment only listed a subset of the applications now included in the attached Appendix A. It was executed November 24, 2004 on behalf of ASSIGNOR and November 27, 2004 on behalf of ASSIGNEE.

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Furthemore, pursuant to the agreed-upon intent of the September 30, 2003 contract, ASSIGNOR explicitly confirms that this Confirmatory Assignment extends to any continuation, division, renewal, substitute, re-examination, or reissue of the applications listed in Appendix A, and that ASSIGNOR'S entire right, title and interest in any such continuation, division, renewal, substitute, re-examination, or reissue of the applications listed in Appendix A is to be held by ASSIGNEE, its legal representatives, successors and assigns, to the full end of the term for which Letters Patent may be granted or may be reissued or extended, as fully and entirely as the same would have been held by ASSIGNOR had this assignment and sale not been made.

AND, ASSIGNOR hereby confirms its agreement that the change in ownership may be recorded in the official records of the United States Patent and Trademark Office.

The undersigned is authorized to act on behalf of ASSIGNOR.

This document contains 2 pages and a 4-page Appendix A.

Osram Opto Semiconductors GmbH
By: R. WHITE CON CONTROL Date Title: CFO Date
Witness Name:
Witness Name: C.GELER Witness Signature: Ch. Leller
Accepted for OSRAM GmBH College December 14, 2004 By: Pokorny Hornung (o 4nse) Date Title: Senicr Vile President

APPENDIX A – LISTING APPLICATIONS FOR SUPPLEMENTAL CONFIRMATORY ASSIGNMENT BETWEEN OSRAM OPTO SEMICONDUCTORS GMBH AND OSRAM GMBH (4 pages)

F&R Reference	OSRAM Reference	First Named Inventor/Applicant	Filed Serial No.	Issue Patent No.
12406-003001	1996P1650 US N	Ulrike Reeh	12/28/1998 09/221,789	
12406-003002	1996P1650 US N1	Ulrike Reeh	12/6/2000 09/731,220	11/2/2004 6,812,500
12406-003003	1996P1650 US N2	Ulrike Reeh	12/7/2000 09/731,452	6/10/2003 6,576,930
12406-004001	1997P2507 US N	Klaus Hohn	5/20/1998 09/082,205	5/23/2000 6,066,861
12406-005001	1997P2507 US 01	Klaus Hohn	3/28/2000 09/536,564	8/21/2001 6,277,301
12406-005002	1997P2507 US 04	Klaus Hohn	12/6/2000 09/731,406	
12406-006001	1997P2507 US 02	Klaus Hohn	8/29/2000 09/650,932	6/12/2001 6,245,259
12406-006002	1997P2507 US 05	Klaus Hohn	4/25/2001 09/843,080	7/15/2003 6,592,780
12406-006003	1997P2507 US 07	Klaus Hohn	7/10/2003 10/616,783	
12406-007001	1997P2507 US 03	Klaus Hohn	9/1/2000 09/654,368	9/2/2003 6,613,247
12406-007002	P19972507 US 06	Klaus Hohn	7/21/2003 10/623,819	
12406-008001	P1999.0014 WO US	Alexandra Debray	2/28/2001 09/786,086	
12406-010001	P2000,0014 US N	Dominik Eisert	2/12/2001 09/781,753	5/4/2004 6,730,939
12406-011001	1998 P 2530 US N	Bruno Acklin	3/8/2001 09/786,699	
12406-012001	1999P8115 US E/GS	Ewald Karl Michael Guenther	6/18/2001 09/786,833	
12406-013001	1999P2851US E/GS	Ewald Karl Michael Guenther	3/9/2001 09/787,400	
12406-014001	1999P8116 US E	Ewald Karl Michael Guenther	6/13/2001 09/786,832	9/28/2004 6,797,211
12406-015001	1998P2810 US N/GS	Rudolf Heimgartner	5/31/2001 09/857,252	2/10/2004 6,688,933
12406-01 6 001	1998 P8119 US N	Markus-Christian Amann	3/28/2001 09/806,260	12/16/2003 6,664,571

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PATENT REEL: 017533 FRAME: 0512

12406-017001	1999 P2843 US N	Klaus Hohn	4/20/2001 09/830,038	
12406-018001	1998 P8100 US N	Martin Rudolf Behringer	3/15/2001 09/787,186	
12406-019001	1999P1146US N/MH	Volker Harle	6/25/2001 09/869,221	3/4/2003 6,527,853
12406-020001	P2001,0799 US N/MH	JOERG BLAESSING	1/22/2002 10/055,142	
12406-021001	P1999,0003USN	VOLKER HARLE	8/13/2001 09/913,394	
12406-022US1	1999P4773USN	RALPH WIRTH	3/25/2002 10/089,017	
12406-023US1	1998P8271USN	Ewald Karl Michael Guenther	6/17/2002 10/168,058	
12406-024001	P2002,0356 US N	BERT BRAUNE	5/5/2003 10/429,916	
12406-025U\$1	1998P8272US E	Ewald Karl Michael Guenther	11/15/2002 10/168,055	. ·
12406-026US1	1998P8273US E	Ewald Karl Michael Guenther	6/17/2002 10/168,271	•
12406-027US1	1998P8274US E	FURONG ZHU	6/17/2002 10/168,249	
12406-028US1	P2000,0014 US N2	Dominik Eisert	8/12/2002 10/203,728	
12406-029U\$1	2000P3233 US N	JOERG BLAESSING	10/7/2002 10/257,079	
12406-030US1	P2000,0032 US N	Georg Bogner	8/22/2002 10/204,576	
12406-031001	P2002 0654 US N	JOERG-ERICH SORG	8/5/2003 10/635,937	
12406-032US1	P2000,0027 US N	ALFRED LELL	8/21/2002 10/204,500	
12406-033US1	P2001,0197 US N	GUENTHER VOGG	9/25/2002 10/239,963	
12406-034001	P,2001,0591 US N	Dominik Eisert	8/12/2002 10/218,061	7/27/2004 6,768,136
12406-035US1	P2000,0068 US N1	STEFAN BADER	9/19/2002 10/239,106	
12406-036US1	P2001,0050 US E-1	Hartmut Frob	8/22/2002 10/204,585	
12406-038US1	P2000,0104 US N	Georg Bogner	11/27/2002 10/296,848	
12406-039US1	P2000,0068 US N2	STEFAN BADER	10/22/2002 10/258,340	
12406-040US1	P2000,0062	GEORG Bogner	10/18/2002 10/258,154	
12406-041US1	P2000,0092 US N	HERBERT BRUNNER	11/25/2002 10/296,405	

12406-042US1	P2000,0082 US N (RS/FK)	Klaus Hohn	11/8/2002 10/275,786	
12406-043P01	P2002,0903 US E	Andreas Stich	10/22/2002 60/420,138	
12406-044US1	P2000,0090 US N (RS/BDS)	Johannes Baur	11/22/2002 10/296,195	
12406-045US1	P2000,0100 US N	BERTHOLD HAHN	11/25/2002 10/296,596	
12406-046US1	P2001,0890 US N	KARSTEN HEUSER	12/20/2002 10/327,031	
12406-047US1	P2000,0158 US N	Johannes Baur	2/3/2003 10/343,851	
12406-048001	P2002,0473 US E	EWALD GUENTHER	1/15/2002 10/051,867	
12406-049US1	2000P19317 US E	Ewald Karl Michael Guenther	3/6/2003 10/363,931	
12406-050001	P2002,0470 US E	RAMADAS KUMAR	9/28/2001 09/968,189	5/18/2004 6,737,753
12406-052US1	1998P3429 US N	EWALD GUENTHER	12/18/2000 09/737,656	٠
12406-053US1	2000P16977 US E	Ewald Karl Michael Guenther	3/6/2003 10/363,200	
12406-054001	P2002,0471 US E	LOW HONG YEE	9/28/2001 09/963,164	
12406-055001	P2003,0102 US E	Volker Haerle	9/24/2003 10/670,917	
12406-055P01	P2003,0102 US E	Volker Haerle	2/24/2003 60/450,068	
12406-056US1	P2003,0072 US N	ARVID HUNZE	3/11/2003 10/380,145	
12406-057001	P2001,0724 US E	Ewald Karl Michael Guenther	7/26/2001 09/915,807	12/9/2003 6,660,547
12406-058001	P2002,0609 US E	MARK AUCH	9/28/2001 09/968,167	٠,
12406-059U\$1	1998P1821 US N	Volker Harle	11/28/2000 09/722,461	
12406-059US2	1998P1821 US2 N	Volker Harle	7 <i>/</i> 22 <i>/</i> 2003 10/625,118	
12406-060US1	P2002,0611 US E	MARK AUCH	11/20/2001 09/989,362	
12406-061P01	P2003,0346 US E	GEORG WITTMANN	5/30/2003 60/475,078	
12406-062P01	P2003,0347 US E	GEORG WITTMANN	5/30/2003 60/474,427	
12406-063P01	P2003,0550 US E	KARSTEN HEUSER	8/27/2003 60/498,439	
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12406-072001	2000P3148 US N	JORG BLASSING	9/11/2002 10/238,680	
12406-074001	1998P1998 US N	Gunther Waitl	12/29/2000 09/754,043	9/23/2003 6,624,491
12406-074002	1998P1998 US N1	Gunter Waiti	7/9/2003 10/616,070	
12406-077001	1995P2026 US N	KARLHEINZ ARNDT	11/18/1999 09/043,840	10/1/2002 6,459,130
12406-078001	1997P2008 US N	KARLHEINZ ARNDT	1/31/2000 09/494,771	4/23/2002 6,376,902
12406-078002	1998P2008 US N1	KARLHEINZ ARNDT	2/5/2002 10/072,836	10/22/2002 6,469,321
12406-078003	1997P2008 US N2	KARLHEINZ ARNDT	9/27/2002 10/259,556	6/3/2003 6,573,580
12406-078004	1997P2008 US N3	KARLHEINZ ARNDT	4/4/2003 10/407,734	7/6/2004 6,759,733
12406-081001	1993P1722 US N2	Gunter Waitl	5/30/1997 08/866,064	8/13/2002 6,432,745
12406-081002	1993P1722 US N3	Gunter Waitl	5/13/2002 10/147,672	4/6/2004 6,716,673
12406-087001	P2002,0469 US E	Kian Soo Ong	9/28/2001 09/968,165	
12406-088001	P2002,0859 US E	HAGEN KLAUSMANN	9/11/2002 10/242,068	
12406-089001	P2002,0661 US E	MARK AUCH	6/10/2002 10/166,829	
12406-090001	P2003,0416 US E	EWALD GUENTHER	4/25/2003 10/249,625	
12406-095001	P2002,0863 US E	HAGEN KLAUSMANN	9/11/2002 10/242,004	
12406-099001	P2002,0864 US E	HAGEN KLAUSMANN	9/12/2002 10/242,266	•
12406-100001	P2002,0476 US E1	EWALD GUENTHER	4/17/2003 10/249,533	
12406-101001	P2002,0476 US E	EWALD GUENTHER	5/7/2002 10/142,208	

CONFIRMATORY ASSIGNMENT

The Effective Date of this Assignment is September 30, 2003.

WHEREAS, Osram Opto Semiconductors GmbH, a German corporation with headquarters located at Wernerwerkstrasse 2, 93049 Regensburg, Germany (hereinafter "ASSIGNOR"), was the owner of the entire right, title, and interest in each patent application listed in Appendix A (the "PATENT APPLICATIONS");

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AND, ASSIGNOR hereby confirms its agreement that the change in ownership may be recorded in the official records of the United States Patent and Trademark Office.

The undersigned is authorized to act on behalf of ASSIGNOR.

This document contains 2 pages and a 2-page Appendix A.

Osram Opto Semiconductors GmbH

By: R. Difference Date

Title: CFC

Witness Name:

Witness Signature:

Witness Signature:

Witness Signature:

Witness Signature:

Witness Signature:

Date

Nov. 27, 2004

By: Or. Seeberg Pokorny Date

Title:

Vice

President

Executive

Vice Bresident

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APPENDIX A LISTING APPLICATIONS FOR CONFIRMATORY ASSIGNMENT BETWEEN OSRAM OPTO SEMICONDUCTORS GMBH AND OSRAM GMBH (2 pages)

F&R Reference	OSRAM Reference	First Named Inventor/Applicant	Filed Serial No.
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12406-007002	P19972507 US 06	Klaus Hohn	7/21/2003 10/623,819
12406-008001	P1999.0014 WO US	Alexandra Debray	2/28/2001 09/786,086
12406-011001	1998 P 2530 US N	Bruno Acklin	3/8/2001 09/786,699
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12406-028US1	P2000,0014 US N2	Dominik Eisert	8/12/2002 10/203,728
12406-030US1	P2000,0032 US N	Georg Bogner	8/22/2002 10/204,576
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12406-035US1	P2000,0068 US N1	STEFAN BADER	9/19/2002 10/239,106
12406-036US1	P2001,0050 US E-1	Hartmut Frob	8/22/2002 10/204,585
12406-039US1	P2000,0068 US N2	STEFAN BADER	10/22/2002 10/258,340
12406-040US1	P2000,0062	GEORG Bogner	10/18/2002 10/258,154
12406-041US1	P2000,0092 US N	HERBERT BRUNNER	11/25/2002 10/296,405
12406-042US1	P2000,0082 US N (RS/FK)	Klaus Hohn	11/8/2002 10/275,786

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PATENT REEL: 017533 FRAME: 0518

12406-044US1	P2000,0090 US N (RS/BDS) Johannes Baur		11/22/2002 10/296,195
12406-045US1	P2000,0100 US N	BERTHOLD HAHN	11/25/2002 10/296,596
12400-047US1	P2000,0158 US N	Johannes Baur	2/3/2003 10/343,851
12406-064001	1995P2026 US N1	Klinger Hashuber	6/17/2002 10/173,055
12406-074002	1998P1998 US N1	Gunter Waitl	7/9/2003 10/616,070

RECORDED: 02/02/2006