

## PATENT ASSIGNMENT COVER SHEET

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 Stylesheet Version v1.2

EPAS ID: PAT4099692

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT	
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT	
<b>CONVEYING PARTY DATA</b>		
	<b>Name</b>	<b>Execution Date</b>
	OMNIVISION CDM OPTICS, INC.	04/26/2010
<b>RECEIVING PARTY DATA</b>		
<b>Name:</b>	OMNIVISION TECHNOLOGIES, INC.	
<b>Street Address:</b>	4275 BURTON DRIVE	
<b>City:</b>	SANTA CLARA	
<b>State/Country:</b>	CALIFORNIA	
<b>Postal Code:</b>	95054	
<b>PROPERTY NUMBERS Total: 1</b>		
	<b>Property Type</b>	<b>Number</b>
	Application Number:	15236833
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<b>Email:</b>	jprice@lathropgage.com, lroberts@lathropgage.com	
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<b>ATTORNEY DOCKET NUMBER:</b>	580962	
<b>NAME OF SUBMITTER:</b>	PHILIP DIZEREGA	
<b>SIGNATURE:</b>	/Philip diZerega/	
<b>DATE SIGNED:</b>	10/17/2016	
<b>Total Attachments: 10</b>		
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## ASSIGNMENT

WHEREAS, **OmniVision CDM Optics, Inc.**, having its principal place of business at 4001 Discovery Drive, Suite 130, Boulder, Colorado, USA, is the owner by assignment of all rights in and to the inventions set forth in the patents and applications for Letters Patent set forth in Schedule A attached hereto;

WHEREAS **OmniVision Technologies, Inc.**, having its principal place of business at 4275 Burton Drive, Santa Clara, California, is desirous of acquiring all rights, title, and interest in and said inventions, said patents, said applications, and in and to any and all Letters Patent which may be granted for or upon said inventions in the United States of America and anywhere in the world;

NOW THEREFORE, to all whom it may concern, be it known that for consideration in the amount of One United States Dollar (\$1.00 USD), the receipt and sufficiency of which are hereby acknowledged, **OmniVision CDM Optics, Inc.**, has sold, assigned, and transferred, and by these presents do sell, assign, and transfer, unto said **OmniVision Technologies, Inc.**, the full and exclusive right, title, and interest, throughout the world, in, to, and under the following:

- (a) said inventions as fully set forth and described in the specifications prepared, and executed preparatory to obtaining Letters Patents of the United States therefor;
- (b) said applications;
- (c) any and all refilings, divisions, continuations, and continuations-in-part of said applications;
- (d) any and all Letters Patents of the United States of America which may issue from said applications, refilings, divisions, continuations, and continuations-in-part;
- (e) any and all reissues and reexaminations of said Letters Patents of the United States of America;
- (f) any and all applications for Letters Patent, and/or the equivalent, upon said inventions which may hereafter be filed in any and all countries foreign to the United States of America;
- (g) any and all refilings, divisions, and continuations, of said foreign-filed applications;

(h) all claims, causes of action and damages for past infringement, if any, of said applications;

(i) any and all Letters Patents of countries foreign to the United States of America which may issue from the said foreign-filed applications, refilings, divisions, and continuations; and

(j) any and all extensions of, and additions to, said Letters Patents of countries foreign to the United States of America.

All of the above shall be held and enjoyed by said **OmniVision Technologies, Inc.**, for its own use and benefit, and for its successors, legal representatives, and assigns, to the full end of the term for which said Letters Patents may be granted, and the undersigned hereby authorizes and requests the Commissioner of Patents and Trademarks to issue the said Letters Patents in accordance with this Assignment.

**OmniVision CDM Optics, Inc.**

4/26/10  
Date

[Signature]  
Name: John Li  
Title: CEO

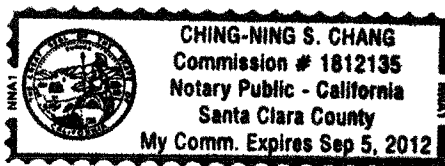
STATE OF \_\_\_\_\_ :  
COUNTY OF \_\_\_\_\_ : SS:

On this 26<sup>th</sup> day of April, 2010, before me personally appeared John Li to me known to be the person described in and who executed the foregoing instrument as his free act and deed.

In witness whereof, I have hereunto set my hand and affixed my notarial seal the day and year last above written.

Ching-Ning S. Chang  
Notary Public

My commission expires:  
(SEAL)



AGREED TO AND ACCEPTED BY:

OmniVision Technologies, Inc.

Date 4/26/10

Name: Ching N. Chan  
Title: Vicky Chou  
VP of Global Mgmt & GC

STATE OF

:  
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SS:

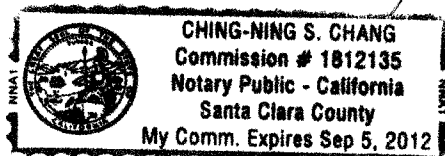
COUNTY OF

On this 26th day of April, 2010, before me personally  
appeared Vicky Chou to me known to be the person described in  
and who executed the foregoing instrument as his free act and deed.

In witness whereof, I have hereunto set my hand and affixed my notarial seal  
the day and year last above written.

Ching-Ning S. Chang  
Notary Public

My commission expires:  
(SEAL)



## SCHEDULE A

Docket No.	Title	Country	Application No./ Patent No.	Filing Date/ Issue Date
462118	Aberration-Tolerant Far Infrared Imaging System	WO	PCT/US07/68586	5/9/2007
485566	Aberration-Tolerant Far Infrared Imaging System	CN	2007800169906	5/9/2007
485568	Aberration-Tolerant Far Infrared Imaging System	JP	2009510159	5/9/2007
485571	Aberration-Tolerant Far Infrared Imaging System	KR	1020087028849	5/9/2007
485572	Aberration-Tolerant Far Infrared Imaging System	EP	077620672	5/9/2007
471230	Alignment Features For Wafer Scale Imaging Systems And Assoc	US	60/956,844	8/20/2007
473949	Alignment Features For Wafer Scale Imaging Systems And Assoc	US	60/982,414	10/24/2007
475191	Alignment Features for Wafer Scale Imaging Systems and Assoc	US	60/992,207	12/4/2007
475193	Alignment Features for Wafer Scale Imaging Systems and Assoc	US	60/992,219	12/4/2007
493171	Anti-Reflective Surfaces and Methods for Making the Same	TW	098126980	8/11/2009
462566	Arrayed Imaging Systems and Associated Methods	WO	PCT/US07/09347	4/17/2007
462758	Arrayed Imaging Systems and Associated Methods	TW	096113560	4/17/2007
484196	Arrayed Imaging Systems and Associated Methods	CN	2007800226557	4/17/2007
484908	Arrayed Imaging Systems and Associated Methods	EP	078357282	4/17/2007
484909	Arrayed Imaging Systems and Associated Methods	KR	1020087028083	4/17/2007
484911	Arrayed Imaging Systems and Associated Methods	IL	194792	4/17/2007
484912	Arrayed Imaging Systems and Associated Methods	US	12/297,608	4/17/2007
484913	Arrayed Imaging Systems and Associated Methods	JP	2009506540	4/17/2007
498096	Arrayed Imaging Systems and Associated Methods	HK	091118990	12/17/2009
424270	CD and DVD Writing and Reading Systems with Extended Depth o	US	60/678,315	5/6/2005
487368	Circularly Symmetric Aspheric Optics Providing Non-Monotonic	TW	098104734	2/13/2009
456105	Deployable Image Sensor	US	11/675,509	2/15/2007

<b>Docket No.</b>	<b>Title</b>	<b>Country</b>	<b>Application No./ Patent No.</b>	<b>Filing Date/ Issue Date</b>
414160	Designing Optical Imaging Systems With Wavefront Coding Elements	US	60/526,216	12/1/2003
453422	Electromagnetic Energy Detection System Including Buried Optics	US	60/836,739	8/10/2006
453960	Electromagnetic Energy Detection System Including Buried Optics	US	60/839,833	8/24/2006
454113	Electromagnetic Energy Detection System Including Buried Optics	US	60/840,656	8/28/2006
455322	Electromagnetic Energy Detection System Including Buried Optics	US	60/850,429	10/10/2006
455701	Fabrication of a Plurality of Optical Elements on a Substrate	US	60/850,678	10/10/2006
455735	Fabrication of a Plurality of Optical Elements on a Substrate	US	60/865,736	11/14/2006
456235 (A)	Fabrication of a Plurality of Optical Elements on a Substrate	US	60/871,917	12/26/2006
456235 (B)	Fabrication of a Plurality of Optical Elements on a Substrate	US	60/871,920	12/26/2006
450400	Far Infrared Camera System	US	60/798,986	5/9/2006
454659	Far Infrared Camera System	US	60/850,772	10/11/2006
487114	Fusing of Images Captured by a Multi-aperture Imaging System	TW	098103287	2/2/2009
448896	Imaging System Including Non-Homogeneous Wavefront Coding Op	US	60/792,444	4/17/2006
445958	Imaging Systems with Pixelated Spatial Light Modulators	WO	PCT/US06/09958	3/20/2006
423783	Improved Miniature Camera	US	60/609,578	9/14/2004
450836	Improved Wafer-Scale Miniature Camera System	US	60/814,120	6/16/2006
451499	Improved Wafer-Scale Miniature Camera System	US	60/802,047	5/18/2006
452654	Improved Wafer-Scale Miniature Camera System	US	60/832,677	7/21/2006
439900	Iris Image Capture Devices and Associated Systems	US	11/225,753 7,652,685	9/13/2005
439902	Iris Image Capture Devices and Associated Systems	WO	PCT/US05/32799	9/13/2005
441181	Iris Recognition at a Large Standoff Distance	US	60/718,522	9/19/2005
421446	Iris Recognition Security for Camera Phones, Digital Cameras	US	60/609,445	9/13/2004
446773	Light Focusing Systems with Extended Depth of Focus	WO	PCT/US06/17609	5/8/2006
420032	Lithographic Systems and Methods with Extended Depth of Focus	US	10/858,337 7,088,419	6/1/2004 8/8/2006
421587	Lithographic Systems and Methods with Extended Depth of Focus	WO	PCT/US04/17508	6/1/2004

<b>Docket No.</b>	<b>Title</b>	<b>Country</b>	<b>Application No./ Patent No.</b>	<b>Filing Date/ Issue Date</b>
421588	Lithographic Systems and Methods with Extended Depth of Focus	US	11/490,593	7/21/2006
442936	Lithographic Systems and Methods with Extended Depth of Focus	CN	2004800149330 ZL200480014933	6/1/2004 7/1/2009
442937	Lithographic Systems and Methods with Extended Depth of Focus	JP	2006523829	6/1/2004
442939	Lithographic Systems and Methods with Extended Depth of Focus	EP	047541750	6/1/2004
437465	Low Height Imaging System and Associated Methods	US	11/227,316 7,453,653	9/14/2005 11/18/2008
439893	Low Height Imaging System and Associated Methods	WO	PCT/US05/34040	9/14/2005
462059	Low Height Imaging System and Associated Methods	US	11/575,284	1/25/2008
462061	Low Height Imaging System and Associated Methods	CN	200580034581X	9/14/2005
462120	Low Height Imaging System and Associated Methods	IL	181890	9/14/2005
462121	Low Height Imaging System and Associated Methods	JP	2007531491	9/14/2005
462122	Low Height Imaging System and Associated Methods	KR	1020077008317 859036	9/14/2005 9/10/2008
462125	Low Height Imaging System and Associated Methods	EP	057989063	9/14/2005
485166	Low Height Imaging System and Associated Methods	CN	2008101613727	9/23/2008
403285-PR	Mechanically Adjustable Optical Phase Filters for Extended D	US	60/090,486	6/24/1998
484195	Membrane Suspended Optical Elements, and Associated Methods	TW	098101408	1/15/2009
445436	Methods for Minimizing Aberrating Effects in Imaging Systems	US	11/560,987 7,319,783	11/17/2006 1/15/2008
430649	Microscope with Pixelated Spatial Light Modulator	US	60/663,271	3/18/2005
479533	Multi-Layer Optical Filter Designs and Associated Systems	WO	PCT/US08/61657	4/25/2008
479534	Multi-Layer Optical Filter Designs and Associated Systems	TW	097115485	4/25/2008
496527	Multi-Layer Optical Filter Designs and Associated Systems	CN	2008800195801	4/25/2008
496528	Multi-Layer Optical Filter Designs and Associated Systems	EP	087469615	4/25/2008
496529	Multi-Layer Optical Filter Designs and Associated Systems	US	12/597,683	4/25/2008
475572	Multi-Region Imaging System	US	61/056,730	5/28/2008
498364	Multi-Region Imaging Systems	EP	087971198	8/4/2008
498363	Multi-Region Imaging Systems	US	12/672,257	8/4/2008



<b>Docket No.</b>	<b>Title</b>	<b>Country</b>	<b>Application No./ Patent No.</b>	<b>Filing Date/ Issue Date</b>
481774	Multi-Region Imaging Systems	WO	PCT/US08/72112	8/4/2008
481775	Multi-Region Imaging Systems	TW	097129555	8/4/2008
470647	Multi-Region Imaging Systems and Associated Methods	US	60/953,998	8/4/2007
466237	Null Lens for Focusing of Imaging Systems and Associated Methods	US	60/910,825	4/10/2007
489754	Object-Based Optical Character Recognition Pre-Processing Algorithm	US	61/157,904	3/6/2009
446104	Optical Imaging Systems And Methods Utilizing Nonlinear And/Or Spatially Varying Image Processing	US	60/788,801	4/3/2006
456228	Optical Imaging Systems And Methods Utilizing Nonlinear And/Or Spatially Varying Image Processing	US	11/696,121	4/3/2007
461134	Optical Imaging Systems And Methods Utilizing Nonlinear And/Or Spatially Varying Image Processing	WO	PCT/US07/65887	4/3/2007
484164	Optical Imaging Systems And Methods Utilizing Nonlinear And/Or Spatially Varying Image Processing	US	12/294,664	4/3/2007
484165	Optical Imaging Systems And Methods Utilizing Nonlinear And/Or Spatially Varying Image Processing	CN	2007800205194	4/3/2007
484166	Optical Imaging Systems And Methods Utilizing Nonlinear And/Or Spatially Varying Image Processing	IL	194374	4/3/2007
484167	Optical Imaging Systems And Methods Utilizing Nonlinear And/Or Spatially Varying Image Processing	EP	077600484	4/3/2007
484168	Optical Imaging Systems And Methods Utilizing Nonlinear And/Or Spatially Varying Image Processing	IN	5934/CHENP/2008	4/3/2007
484169	Optical Imaging Systems And Methods Utilizing Nonlinear And/Or Spatially Varying Image Processing	KR	1020087026314	4/3/2007
446110	Optical system with a lenslet configuration for accepting light over a range of incident angles	US	60/808,698	5/26/2006
469788	Optimized Image Processing for Wavefront Coded Imaging Systems	CN	2007101363515	7/24/2007
470432	Optimized Image Processing for Wavefront Coded Imaging Systems	EP	070192760	10/1/2007
404701	Optimized Image Processing for Wavefront Coded Imaging Systems	WO	PCT/US03/06289	2/27/2003
408654	Optimized Image Processing for Wavefront Coded Imaging Systems	US	10/376,924 7,379,613	2/27/2003 5/27/2008

<b>Docket No.</b>	<b>Title</b>	<b>Country</b>	<b>Application No./ Patent No.</b>	<b>Filing Date/ Issue Date</b>
424391	Optimized Image Processing for Wavefront Coded Imaging Systems	CN	038093715 038093715	2/27/2003 9/19/2007
469937	Optimized Image Processing for Wavefront Coded Imaging Systems	GB	037113388 1478966	2/27/2003 11/14/2007
469938	Optimized Image Processing for Wavefront Coded Imaging Systems	FI	037113388 1478966	2/27/2003 11/14/2007
469940	Optimized Image Processing for Wavefront Coded Imaging Systems	DE	037113388 60317472808	2/27/2003 11/14/2007
469942	Optimized Image Processing for Wavefront Coded Imaging Systems	FR	037113388 1478966	2/27/2003 11/14/2007
469943	Optimized Image Processing for Wavefront Coded Imaging Systems	SE	037113388 1478966	2/27/2003 11/14/2007
474069	Optimized Image Processing for Wavefront Coded Imaging Systems	US	11/929,981	10/30/2007
474070	Optimized Image Processing for Wavefront Coded Imaging Systems	US	11/929,746	10/30/2007
424504	Optimized Image Processing for Wavefront Coded Imaging Systems	EP	037113388 1478966	2/27/2003 11/14/2007
438965	Ray Correction Apparatus and Method	US	60/697,710	7/8/2005
451144	Ray Correction Apparatus and Method	WO	PCT/US06/026690	7/10/2006
454006	Resonant Detectors	US	60/864,647	11/7/2006
474504	Resonant Structures For Electromagnetic Energy Detection And	WO	PCT/US07/83897	11/7/2007
446093	Ruggedized Image Sensors	US	60/773,443	2/15/2006
450838	Saturation Optics	US	60/808,790	5/26/2006
451500	Saturation Optics	US	60/802,724	5/23/2006
462759	Saturation Optics	WO	PCT/US07/69573	5/23/2007
462760	Saturation Optics	US	12/376,540	5/23/2007
467695	Saturation Optics	TW	096118434	5/23/2007
485626	Saturation Optics	EP	077976934	5/23/2007
500674	Optical System With Segmented Pupil Function	EP	101574010	
485627	Saturation Optics	CN	2007800182008	5/23/2007
485628	Saturation Optics	KR	1020087030863	5/23/2007
485629	Saturation Optics	JP	2009512288	5/23/2007
402980	System and Method for Forming a Non-Rotationally Symmetric P	US	60/394,175	7/3/2002
404982	System and Method for Forming a Non-Rotationally Symmetric P	US	10/612,208 7,089,835	7/2/2003 8/15/2006
430513	System and Method for Optimizing Optical and Digital System	US	11/000,819 7,469,202	12/1/2004 12/23/2008
431342	System and Method for Optimizing Optical and Digital System	WO	PCT/US04/40218	12/1/2004
450814	System and Method for Optimizing Optical and Digital System	EP	048126700	12/1/2004
450815	System and Method for Optimizing Optical and Digital System	IL	176065	12/1/2004

<b>Docket No.</b>	<b>Title</b>	<b>Country</b>	<b>Application No./ Patent No.</b>	<b>Filing Date/ Issue Date</b>
450816	System and Method for Optimizing Optical and Digital System	JP	2006542707	12/1/2004
450817	System and Method for Optimizing Optical and Digital System	CN	200480039037X	12/1/2004
450818	System and Method for Optimizing Optical and Digital System	IN	1928/CHENP/2006	12/1/2004
483231	System and Method for Optimizing Optical and Digital System	CN	2008101312772	12/1/2004
486689	System and Method for Optimizing Optical and Digital System	US	12/341,359	12/22/2008
406613	Systems and Methods for Minimizing Aberrating Effects in Imaging Systems	US	60/459,417	3/31/2003
420229	Systems and Methods for Minimizing Aberrating Effects in Imaging Systems	US	10/813,993 7,260,251	3/31/2004 8/21/2007
420424	Systems and Methods for Minimizing Aberrating Effects in Imaging Systems	WO	PCT/US04/09743	3/31/2004
439989	Systems and Methods for Minimizing Aberrating Effects in Imaging Systems	IL	170697	3/31/2004
439992	Systems and Methods for Minimizing Aberrating Effects in Imaging Systems	IN	472/CHENP/2005 229134	3/31/2004 2/13/2009
439993	Systems and Methods for Minimizing Aberrating Effects in Imaging Systems	CN	2004800088708	3/31/2004
439996	Systems and Methods for Minimizing Aberrating Effects in Imaging Systems	JP	2006509486	3/31/2004
439997	Systems and Methods for Minimizing Aberrating Effects in Imaging Systems	EP	047495346	3/31/2004
445437	Systems and Methods for Minimizing Aberrating Effects in Imaging Systems	US	11/561,065 7,450,745	11/17/2006 11/11/2008
445537	Systems and Methods for Minimizing Aberrating Effects in Imaging Systems	US	12/267,205	11/7/2008
479468	Systems and Methods for Minimizing Aberrating Effects in Imaging Systems	IN	to be assigned	4/4/2008
462071	Task Based Imaging Systems	EP	068514439	9/19/2006
462072	Task Based Imaging Systems	CN	2006800374554	9/19/2006
462073	Task Based Imaging Systems	KR	1020087009424	9/19/2006
462074	Task Based Imaging Systems	JP	2008531444	9/19/2006
462075	Task Based Imaging Systems	IL	190083	9/19/2006
453924	Task-Based Imaging Systems	US	11/524,142	9/19/2006
453925	Task-Based Imaging Systems	WO	PCT/US06/036556	9/19/2006
466988	Thin Film Filters and Associated Methods	US	60/913,858	4/25/2007
466236	Thru-Focus MTF Design for Focusing of Imaging Systems and As	US	60/910,824	4/10/2007
466238	Thru-Focus MTF Design for Focusing of Imaging Systems and As	US	60/911,440	4/12/2007
453478	Transmissive Detectors	US	60/971,992	9/13/2007

<b>Docket No.</b>	<b>Title</b>	<b>Country</b>	<b>Application No./ Patent No.</b>	<b>Filing Date/ Issue Date</b>
484186	Transmissive Detectors, Systems Incorporating Same, and Associated Methods	TW	097135287	9/12/2008
484187	Transmissive Detectors, Systems Incorporating Same, and Associated Methods	WO	PCT/US08/76416	9/15/2008
454080	Wavefront Coded Imaging Systems	US	11/511,023 7,554,732	8/28/2006 6/30/2009
454081	Wavefront Coded Imaging Systems	US	11/511,022 7,554,731	8/28/2006 6/30/2009
402802	Wavefront Coded Imaging Systems With Optimized Image Process	US	60/360,147	2/27/2002
424390	Wavefront Coded Imaging Systems with Optimized Image Process	JP	2003571784	2/27/2003
445701	Zoom Lens Systems with Wavefront Coding	US	60/779,712	3/6/2006
456233	Zoom Lens Systems with Wavefront Coding	US	11/682,816	3/6/2007
461135	Zoom Lens Systems with Wavefront Coding	WO	PCT/US07/63423	3/6/2007
484462	Zoom Lens Systems with Wavefront Coding	CN	2007800163859	3/6/2007
484464	Zoom Lens Systems with Wavefront Coding	JP	2008558510	3/6/2007
484465	Zoom Lens Systems with Wavefront Coding	KR	1020087024423	3/6/2007
484466	Zoom Lens Systems with Wavefront Coding	EP	077580157	3/6/2007