

## PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT												
NATURE OF CONVEYANCE:	ASSIGNMENT												
CONVEYING PARTY DATA													
<table border="1"> <thead> <tr> <th>Name</th> <th>Execution Date</th> </tr> </thead> <tbody> <tr> <td>MICHAEL WITTEK</td> <td>01/23/2014</td> </tr> <tr> <td>NORIIKO TANAKA</td> <td>12/20/2013</td> </tr> <tr> <td>MILA FISCHER</td> <td>01/23/2014</td> </tr> <tr> <td>MATTHIAS BREMER</td> <td>01/23/2014</td> </tr> <tr> <td>ANDREAS TAUGERBECK</td> <td>01/23/2014</td> </tr> </tbody> </table>		Name	Execution Date	MICHAEL WITTEK	01/23/2014	NORIIKO TANAKA	12/20/2013	MILA FISCHER	01/23/2014	MATTHIAS BREMER	01/23/2014	ANDREAS TAUGERBECK	01/23/2014
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<table border="1"> <tr> <td>Name:</td> <td>MERCK PATENT GMBH</td> </tr> <tr> <td>Street Address:</td> <td>FRANKFURTER STRASSE 250</td> </tr> <tr> <td>City:</td> <td>DARMSTADT</td> </tr> <tr> <td>State/Country:</td> <td>GERMANY</td> </tr> <tr> <td>Postal Code:</td> <td>64293</td> </tr> </table>		Name:	MERCK PATENT GMBH	Street Address:	FRANKFURTER STRASSE 250	City:	DARMSTADT	State/Country:	GERMANY	Postal Code:	64293		
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<table border="1"> <thead> <tr> <th>Property Type</th> <th>Number</th> </tr> </thead> <tbody> <tr> <td>Application Number:</td> <td>14236741</td> </tr> </tbody> </table>		Property Type	Number	Application Number:	14236741								
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Application Number:	14236741												
CORRESPONDENCE DATA													
Fax Number:	(703)243-6410												
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<i>Correspondence will be sent via US Mail when the email attempt is unsuccessful.</i>													
Correspondent Name:	MILLEN, WHITE, ZELANO & BRANIGAN-AEW												
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Address Line 2:	SUITE 1400												
Address Line 4:	ARLINGTON, VIRGINIA 22201												
ATTORNEY DOCKET NUMBER:	MERCK-4172												
NAME OF SUBMITTER:	ASHLEY WEBER												

Signature:	/Ashley Weber/
Date:	02/03/2014
Total Attachments: 2 source=EXECUTED_ASSIGNMENT#page1.tif source=EXECUTED_ASSIGNMENT#page2.tif	

PM/124

# ASSIGNMENT

ATTY. DOCKET NO.

WHEREAS the below named inventor (if only one inventor is named below) or inventors (if plural inventors are named below) hereinafter referred to as the ASSIGNOR invented a certain improvement(s) relating to

LIQUID CRYSTAL MEDIUM AND ~~LIQUID CRYSTAL DISPLAY~~ LIQUID CRYSTAL DISPLAY

and for which one or more of the following apply:

- ☐ U.S. Provisional Application Serial No. \_\_\_\_\_ was filed in the United States Patent and Trademark Office on \_\_\_\_\_
- ☐ A U.S. Non-Provisional \_\_\_\_\_
- ☐ application for Letters Patent to be filed in the United States Patent and Trademark Office was executed on even date.
- ☐ Application Serial No. \_\_\_\_\_ for Letters Patent was filed in the U.S. Patent and Trademark Office on \_\_\_\_\_
- ☒ as International Application No. PCT/EP2012/002949 was filed on 13 July 2012, designating the United States.

AND WHEREAS

MERCK PATENT GESELLSCHAFT  
MIT BESCHRÄNKTER HAFTUNG  
Darmstadt, Germany

hereinafter referred to as the ASSIGNEE, is desirous of acquiring the entire right, title, and interest in and to said invention and all application(s) listed above, including any and all earlier priority rights (U.S. and foreign), divisions and continuations thereof, and any and all Letters Patent which may be granted thereon, including any and all renewals, reissues, reexaminations and extensions thereof.

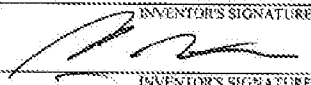
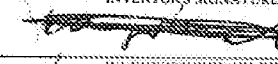
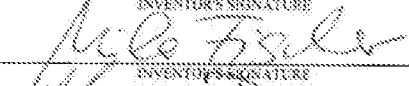
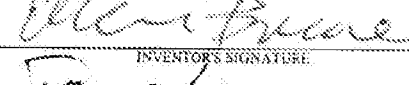

NOW, WITNESSETH that for good and valuable consideration, the receipt whereof is hereby acknowledged, ASSIGNOR hereby assigns, sells, and transfers to ASSIGNEE, its assigns and legal representatives, the entire and exclusive right, title and interest in and to said invention and application(s), including any and all divisions and continuations thereof, and any and all Letters Patent which may be granted therefor, including any and all renewals, reissues, reexaminations and extensions thereof, and in and to any and all U.S. (including provisional) or foreign priority and/or convention rights or benefits accruing or to accrue with respect to the filing or securing of patents in the United States and/or any countries foreign thereto concerning said invention, SAID ASSIGNEE, its assigns and legal representatives to have, hold, exercise, and enjoy said invention and application, including any and all earlier priority rights (U.S. and foreign), divisions and continuations thereof, any and all Letters Patent which may be granted therefor, including any and all renewals, reissues, reexaminations and extensions thereof, including the right to sue for damages occurring before the assignment, with all the rights, powers, privileges and advantages in anywise arising from or appertaining thereto, for and during the term or terms of any and all such Letters Patent when granted, including any and all renewals, reissues, reexaminations and extensions thereof, for the use and benefit of ASSIGNEE and its assigns and legal representatives, in as ample and beneficial a manner to all intents and purposes as the ASSIGNOR might or could have held and enjoyed the same, if the assignment had not been made.

AND ASSIGNOR hereby agrees to execute all papers that may be necessary to file applications in the United States and foreign countries for said invention and to assign the same to said ASSIGNEE, its assigns and legal representatives and to execute any other papers that may be needed in connection with filing said applications and securing Letters Patents thereon.

AND ASSIGNOR authorizes and requests the Commissioner of Patents and Trademarks to issue a Letters Patent on said application, and on any and all divisions and continuations thereof, to ASSIGNEE, its assigns and legal representatives, in accordance herewith.

The undersigned hereby grant(s) the law firm of Millien, White, Zelano & Branigan, P.C. the power to insert on this assignment information which may be necessary or desirable in order for the United States Patent and Trademark Office to properly record this document.

IN TESTIMONY WHEREOF this assignment is executed by ASSIGNOR

201 FULL NAME OF SOLE OR FIRST NAMED INVENTOR	INVENTOR'S SIGNATURE	DATE
Michael Wittek		23. Jan. 2014
202 FULL NAME OF SECOND JOINT INVENTOR	INVENTOR'S SIGNATURE	DATE
Norihiko Tanaka		
203 FULL NAME OF THIRD JOINT INVENTOR	INVENTOR'S SIGNATURE	DATE
Mila Fischer		23. Jan. 2014
204 FULL NAME OF FOURTH JOINT INVENTOR	INVENTOR'S SIGNATURE	DATE
Matthias Bremer		23. Jan. 2014
205 FULL NAME OF FIFTH JOINT INVENTOR	INVENTOR'S SIGNATURE	DATE
Andreas Taugerbeck		23. Jan. 2014
206 FULL NAME OF SIXTH JOINT INVENTOR	INVENTOR'S SIGNATURE	DATE
207 FULL NAME OF SEVENTH JOINT INVENTOR	INVENTOR'S SIGNATURE	DATE
208 FULL NAME OF EIGHTH JOINT INVENTOR	INVENTOR'S SIGNATURE	DATE
209 FULL NAME OF NINTH JOINT INVENTOR	INVENTOR'S SIGNATURE	DATE

PM1124

# ASSIGNMENT

ATTY. DOCKET NO

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NOW, WITNESSETH that for good and valuable consideration, the receipt whereof is hereby acknowledged, ASSIGNOR hereby assigns, sells, and transfers to ASSIGNEE, its assigns and legal representatives, the entire and exclusive right, title and interest in and to said invention and application(s), including any and all divisions and continuations thereof, and any and all Letters Patent which may be granted therefor, including any and all renewals, reissues, reexaminations and extensions thereof, and in and to any and all U.S. (including provisional) or foreign priority and/or convention rights or benefits accruing or to accrue with respect to the filing or securing of patents in the United States and/or any countries foreign thereto concerning said invention. SAID ASSIGNEE, its assigns and legal representatives to have, hold, exercise, and enjoy said invention and application, including any and all earlier priority rights (U.S. and foreign), divisions and continuations thereof, any and all Letters Patent which may be granted therefor, including any and all renewals, reissues, reexaminations and extensions thereof, including the right to sue for damages occurring before the assignment, with all the rights, powers, privileges and advantages in anywise arising from or appertaining thereto, for and during the term or terms of any and all such Letters Patent when granted, including any and all renewals, reissues, reexaminations and extensions thereof, for the use and benefit of ASSIGNEE and its assigns and legal representatives, in as ample and beneficial a manner to all intents and purposes as the ASSIGNOR might or could have held and enjoyed the same, if the assignment had not been made.

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202 FULL NAME OF SECOND JOINT INVENTOR	INVENTOR'S SIGNATURE	DATE
Norihiko Tanaka	<i>Norihiko Tanaka</i>	20 Dec 2013
203 FULL NAME OF THIRD JOINT INVENTOR	INVENTOR'S SIGNATURE	DATE
Mila Fischer		
204 FULL NAME OF FOURTH JOINT INVENTOR	INVENTOR'S SIGNATURE	DATE
Matthias Bremer		
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RECORDED: 02/03/2014

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