

FORM PTO-1595 (Rev. 6-93)

102642189

U.S. DEPARTMENT OF COMMERCE

### Patent and Trademark Office

# RECORDATION FORM COVER SHEET

| PATEN                                                                                  | ITS ONLY                                                                                                  |
|----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| To the Commissioner for Patents ATT                                                    | Attorney Docket No.: 041501-5597 N: MAIL STOP ASSIGNMENT RECORDATION SERVICES                             |
| Please record the attached original documents or copy the                              | reof.                                                                                                     |
| 1. Name of conveying party(ies):                                                       | 2. Name and address of receiving party(ies):                                                              |
| (1) Byoung Ho LIM (2) Seong Hee KIM (3) Chul NAM  (7) 3/2/3                            | Name: LG.PHILIPS LCD CO., LTD.                                                                            |
| (3) Chul NAM<br>(4) Jong Woo PARK<br>(5) Gyu Bong KIM (2. 30-03                        | Internal Address:                                                                                         |
| Additional names of conveying party(ies) attached?  ☐ Yes ☐ No                         | Street Address: 20, Yoido-dong, Youngdungpo-ku, Scoul, Korea                                              |
| 3. Nature of conveyance:                                                               |                                                                                                           |
| Assignment                                                                             | Additional name(s) & address(es) attached?                                                                |
| Security Agreement Change of Name Other                                                | ☐ Yes ⊠ No                                                                                                |
| Execution Date: (1)&(3)-(5) December 23, 2003, (2) December 24, 2003                   | 10747073                                                                                                  |
| 4. New Application number(s) or patent number(s): NE                                   | W APPLICATION                                                                                             |
| If this document is being filed together with a new applica                            | tion the execution date of the application is:                                                            |
|                                                                                        |                                                                                                           |
|                                                                                        | 2003, (2) December 24, 2003<br>B. Patent No.(s)                                                           |
| Additional numbers attached: ☐Yes ☒No                                                  |                                                                                                           |
| Name and address of party to whom correspondence concerning document should be mailed: | 6. Total number of applications and patents involved: 1                                                   |
| Name: Robert J. Gaybrick                                                               | 7. Total fee (37 C.F.R. §3.41): _\$40.00  ☐ Enclosed  Authorized to be charged to Deposit Account 50-0310 |
| Internal Address: Morgan, Lewis & Bockius LLP Customer No. 09629                       | 8. Deposit Account No. 50-0310 (Attach duplicate page if paying by deposit account)                       |
| Street Address: 1111 Pennsylvania Ave., N.W. City: Washington State: D.C. Zip: 20004   |                                                                                                           |
| 9. Statement and Signature To the best of my knowledge and belief the foresting inf    | amortion is true and someof and                                                                           |
| copy of the original document.                                                         | ormation is true and correct and any attached copy is a true                                              |
| Robert J. Goodell Reg. No. 41,040 Name of Person Signing Signature                     | December 30, 2003  Date                                                                                   |
| Total m                                                                                | umber of pages including cover sheet, attachments and documents: 4                                        |
| `                                                                                      |                                                                                                           |

I-WA/1661917.2

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**PATENT REEL: 014856 FRAME: 0651**  23 DEC '03 13:36 LG.LCD

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ATTORNEY DOCKET NO: 041501-5597 SOLEJOINT INVENTION (U.S. Rights Only)

#### ASSIGNMENT

WHEREAS I/We, the below named inventor(s), [hereinafter referred to as Assignor(s)], have unde an invention entitled.

## TRANSREFLECTION-TYPE LIQUID CRYSTAL DISPLAY DEVICE

| and method of fabricating the same                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                             |                                                                                                                                                               |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| for which I/WE executed an application for                                                                                                                                                                                                                                                                                                    | United States Letters Patent concucrently i                                                                                                                                                 | acrowith; or filed an application                                                                                                                             |  |
| for United States Letters Patent on                                                                                                                                                                                                                                                                                                           | ; and                                                                                                                                                                                       | • •                                                                                                                                                           |  |
| WHERBAS, LG.Philips LCD Co.,<br>Youngthingpo-kii, Seoul, Korea (hereinafter<br>interest in and to this invention, the applica-<br>to be issue upon this application;                                                                                                                                                                          | Lid., a corporation of Korea, whose post of referred to as Assignee), is desirous of section for United States Letters Patent on this                                                       | maniform that a main in the state of the                                                                                                                      |  |
| NOW THEREFORE, be it known is hereby acknowledged, I/WE, as assignore transfer, and set over unto the assignee, its I to this invention and this application, and al States which may be granted thereon, and al of Patents and Trademarks of the United Stand assigns, in accordance with the terms of                                       | awful successors and serigos, MY/OUR en<br>l divisions, and continuations thereof, and o<br>l reissuce thereof, and I/WE hereby author<br>was to issue all Letters Patent for this Inven-   | over, and do hereby sell, assign,<br>dire right, title, and imprest in and<br>all Letters Patent of the United<br>ize and recover the Commissioner            |  |
| AND, I/WE HEREBY further cow<br>with assignee, its successors and assigns, an<br>proceeding, sign all lawful papers when call<br>desirable to perfect the title to this inventior<br>continuation, and reissue applications, make<br>successors and assigns, to obtain and enforce<br>understood that any exponse incident to the<br>assigns. | ed upon to do so, execute and deliver all pa<br>in said assigner, its successors and assigns<br>tall rightful oaths and generally do everyth<br>proper patent protection for this invention | vention and testify in any legal spens that may be necessary or a, execute all divisional, ing possible to aid assignce, its n in the United States, it being |  |
| AND, I/WE HERRBY authorize at Power of Attoracy in this application, to institute filing date and application number of sale                                                                                                                                                                                                                  | nd request the attorneys I/WE have empowers here in parentheres (Application No<br>d application when known.                                                                                | December 30, 2003                                                                                                                                             |  |
| IN TESTIMONY WHEREOF, I/V                                                                                                                                                                                                                                                                                                                     | /E have heresarto set our hand(s).                                                                                                                                                          |                                                                                                                                                               |  |
| Full Name of First Assignor                                                                                                                                                                                                                                                                                                                   | Assignor's Signature                                                                                                                                                                        | Date                                                                                                                                                          |  |
|                                                                                                                                                                                                                                                                                                                                               | 1211                                                                                                                                                                                        | 143. 12.23                                                                                                                                                    |  |
| Byoung Ho LIM                                                                                                                                                                                                                                                                                                                                 | BALLE                                                                                                                                                                                       |                                                                                                                                                               |  |
| Address Hyundai APT, 101-902, Bonggok-dong, Kumi-shi, Kyongsangbuk-do, Kores                                                                                                                                                                                                                                                                  |                                                                                                                                                                                             | Citizenship                                                                                                                                                   |  |
| Trymost Art 1: 101-90%, Donggor-hong, K                                                                                                                                                                                                                                                                                                       | mm-am, Kyongaangour-oo, Kores                                                                                                                                                               | Republic of Korea                                                                                                                                             |  |
| Full Name of Second Assignor                                                                                                                                                                                                                                                                                                                  | Assignor's Signature                                                                                                                                                                        | Date                                                                                                                                                          |  |
| -                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                             | 7-10                                                                                                                                                          |  |
| Seong Hcc KTM                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                             |                                                                                                                                                               |  |
| Address Woobung Sinchconji town 111-302, Namy                                                                                                                                                                                                                                                                                                 | will Control                                                                                                                                                                                | Citizenship                                                                                                                                                   |  |
| Kyongsangbuk-de, Korsa                                                                                                                                                                                                                                                                                                                        | um, scordeok-myun, Crangon-gran,                                                                                                                                                            | Republic of Korea                                                                                                                                             |  |
| Names of addi                                                                                                                                                                                                                                                                                                                                 | tional inventors attached [X] Yes [ ]                                                                                                                                                       | Na                                                                                                                                                            |  |

1-WA/2095109.1

Morgan, Lewis & Bockins LLP

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**PATENT REEL: 014856 FRAME: 0652**  26.DEC.2003 12:56

NO.931 F.1/6

ATTORNEY DOCKET NO: 041501-5597 SOLEJOINT INVENTION

(U.S. Rights Only)

#### **ASSIGNMENT**

WHEREAS I/We, the below named inventor(s), [horeinafter referred to as Assignor(s)], have made an invention entitled;

### TRANSREPLECTION-TYPE LIQUID CRYSTAL DISPLAY DEVICE

| AND METHOD OF FABRICATING THE SAME                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                              |  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| for which I/WR executed an application for United States Letters Patent on                                                                                                                                           | on for United States Letters Patent concurrent<br>                                                                                                                                                                                                                                                                                          | y herewith; or filed an application                                                                                                                                          |  |
| You <b>ngdungpo-k</b> u, Seoul, Korea (herci                                                                                                                                                                         | Co., Ltd., a corporation of Korea, whose por<br>mafter referred to an Assignee), is desirous of<br>plication for United States Letters Patent on t                                                                                                                                                                                          | securing the entire right, title, and                                                                                                                                        |  |
| is hereby acknowledged, I/WE, as assigned<br>transfer, and act over unto the sasigned<br>to this invention and this application,<br>States which may be granted thereon,                                             | nown that, for good and valuable consideration<br>ignor(s), have sold, statigned, transferred, and<br>s, its lawful encossors and assigns, MY/OUR<br>and all divisions, and continuations thereof, as<br>and all reissues thereof; and I/WE hereby auti-<br>ted States to issue all Letters Patent for this im-<br>time of this Assignment; | set over, and do hereby sell, assign,<br>entire right, title, and interest in and<br>ad all Letters Patent of the United<br>norise and request the Commissioner              |  |
| with assignce, its successors and assig<br>proceeding, sign all lawful papers who<br>desirable to perfect the title to this invo-<br>continuation, and release applications<br>successors and assists, to obtain and | or coverant and agree that I/WE will, without on, any facts known to ME/US respecting this in called upon to do so, execute and deliver all render in said assignee, its successors and assignee all rightful oaths and generally do ever anfarce proper patent protection for this invento the execution of such papers shall be borned.   | invention and testify in any legal il papers that may be necessary or igns, execute all divisional, ything possible to aid assignee, its nion in the United States, it being |  |
| Power of Attorney in this application,<br>the filing date and application number                                                                                                                                     | rize and request the attempts I/WE have surp<br>to insert here in parentheses (Application No<br>t of said application, when known.<br>IF, I/WE have hereunto set our hand(s).                                                                                                                                                              | owered in the Declaration and filed December 30, 2003                                                                                                                        |  |
| Full Name of First Assignor                                                                                                                                                                                          | Assignor's Signature                                                                                                                                                                                                                                                                                                                        | Date                                                                                                                                                                         |  |
| Byoung Ho LIM Address                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                             | Citizenship                                                                                                                                                                  |  |
| Hyundai APT. 101-902, Bonggok-d                                                                                                                                                                                      | ong, Kumi-shi, Kyongsangbuk-do, Korea                                                                                                                                                                                                                                                                                                       | Republic of Korea                                                                                                                                                            |  |
| Full Name of Second Assignor                                                                                                                                                                                         | Assignor's Signature                                                                                                                                                                                                                                                                                                                        | Date                                                                                                                                                                         |  |
|                                                                                                                                                                                                                      | LEDUC HEE KIM                                                                                                                                                                                                                                                                                                                               | 24 Dec. 2003                                                                                                                                                                 |  |

Names of additional inventors attached [X] Yes

Woobang Sincheonji town 111-302, Namyulli, Seokjeok-myun, Chilgok-gun,

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[]No

Mergan, Lawis & Bookins LLP

1-WA/2095109.1

Kyongsungbuie-do, Keren

REEL: 014856 FRAME: 0653

**PATENT** 

Citizenship

Republic of Korea

23 DEC '03 13:36 LG.LCD

P.4

ATTORNEY DOCKET NO: 041501-5597 SOLE/JOINT INVENTION (U.S. Rights Only)

| Full Name of Third Assignor                                                          | Assignor's Signature | Date              |
|--------------------------------------------------------------------------------------|----------------------|-------------------|
| Chul NAM                                                                             | 2                    | '03. ID.33        |
| Address 662-48, IpAm-dong, Gangueung-shi, Gangwon-do, Kores                          |                      | Citizenship       |
|                                                                                      |                      | Republic of Karen |
| Full Name of Fourth Assignor                                                         | Assigner's Signature | Date              |
| Jone Woo PARK                                                                        | Room                 | 03. 12.23         |
| Address<br>1208-18, Bisan5-dong, Seo-gu, Taogu-kwangyokshi, Korea                    |                      | Citizenship       |
|                                                                                      |                      | Republic of Kores |
| I'ull Name of Fifth Assignor                                                         | Assignor's Signature | Date              |
| Gyu Bong KIM                                                                         | shak                 | 12.23.0003        |
| Address Dengbu Villa A-202, 674-20, Sinam 1-dong, Dong-gu, Tsegu-kwangyoloshi, Koros |                      | Citizenship       |
|                                                                                      |                      | Republic of Korea |

Names of additional inventors attached [ ] Yes

X No

Morgan, Lawis & Bockius LLF

1-WA/2095109.1

PATENT REEL: 014856 FRAME: 0654

**RECORDED: 12/30/2003**