

Form PTO-1595 (Rev. 09/04)  
OMB No. 0651-0027 (exp. 8/30/2005)

U.S. DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office

## RECORDATION FORM COVER SHEET PATENTS ONLY

To the Director of the U.S. Patent and Trademark Office: Please record the attached documents or the new address(es) below.

### 1. Name of conveying party(ies)/Execution Date(s):

JIN SUK JEONG (12/10/2007), KI SOO LEE  
(12/10/2007), KYOUNG JUN KIM (12/10/2007),  
JU HEON LEE (12/10/2007), AND

Execution Date(s): in parentheses after inventor name

Additional name(s) of conveying party(ies) attached? ☒ Yes ☐ No

### 3. Nature of Conveyance:

- ☒ Assignment ☐ Merger  
☐ Security Agreement ☐ Change of Name  
☐ Government Interest Assignment  
☐ Executive Order 9424, Confirmatory License  
☐ Other \_\_\_\_\_

### 2. Name and address of receiving party(ies)

Name: SAMSUNG CORNING CO., LTD.

Internal Address: \_\_\_\_\_

Street Address: \_\_\_\_\_

472, Sin-dong, Yeongtong-gu

City: Suwon-si, Gyeonggi-do

State: \_\_\_\_\_

Country: Republic of Korea Zip: 443-732

Additional name(s) & address(es) attached: ☐ Yes ☒ No

### 4. Application or patent number(s):

A. Patent Application No.(s)

11/978,547

☐

This document is being filed together with a new application.

B. Patent No.(s)

Additional numbers attached?

☐ Yes ☒ No

### 5. Name and address to whom correspondence concerning document should be mailed:

Name: Daryl K. Neff  
LERNER, DAVID, LITTENBERG,  
KRUMHOLZ & MENTLIK, LLP

Internal Address: Atty. Dkt.: SAMSUN 3.0-032 (33)

Street Address: 600 South Avenue West

City: Westfield

State: NJ Zip: 07090

Phone Number: (908) 518-6396

Fax Number: (908) 654-0415

Email Address: dneff@ldlkm.com

### 6. Total number of applications and patents involved:

1

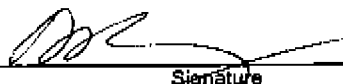
7. Total fee (37 CFR 1.21(h) & 3.41) \$ 40.00

- ☐ Authorized to be charged by credit card  
☒ Authorized to be charged to deposit account  
☐ Enclosed  
☐ None required (government interest not affecting title)

### 8. Payment Information

- a. Credit Card Last 4 Numbers \_\_\_\_\_  
Expiration Date \_\_\_\_\_  
b. Deposit Account Number 12-1095  
Authorized User Name Daryl K. Neff

### 9. Signature:



Daryl K. Neff - 38,253  
Name of Person Signing

January 16, 2008

Date

Total number of pages including cover sheet, attachments, and documents:

7

| Form PTO-1595   |  | <b>RECORDATION FORM COVER SHEET<br/>(continued)</b>      |  |
|---|--|--|--|
| <b>Additional Conveying Party(ies)/Execution Date(s) (1. Continued):</b><br><br>Chang Uk Jin (12/10/2007) |  |  |  |
| <b>Additional Assignees (2. Continued):</b>   |  |  |  |
| Assignee Name: _____  |  |  |  |
| Internal Address: _____   |  |  |  |
| Street Address: _____   |  |  |  |
| City: _____ State: _____ Country: _____ Zip: _____  |  |  |  |
| Assignee Name: _____  |  |  |  |
| Internal Address: _____   |  |  |  |
| Street Address: _____   |  |  |  |
| City: _____ State: _____ Country: _____ Zip: _____  |  |  |  |
| Assignee Name: _____  |  |  |  |
| Internal Address: _____   |  |  |  |
| Street Address: _____   |  |  |  |
| City: _____ State: _____ Country: _____ Zip: _____  |  |  |  |
| <b>Additional Applications and/or Patents (4. Continued):</b>   |  |  |  |
| Additional Patent Application Numbers<br>4A. Continued:   |  | Additional Patent Numbers<br>4B. Continued:              |  |
|   |  |  |  |
| Additional numbers attached?  |  | <input type="checkbox"/> Yes <input type="checkbox"/> No |  |

former PTO/SB/15 (8-00) Modified LDLK&amp;M

**ASSIGNMENT OF UTILITY APPLICATION**

Docket Number (Optional)

SAMSUN 3.0-032

Whereas, I, Jin Suk JEONG of  
c/o Samsung Corning Co., Ltd.; Korea Advanced Nano Fab Center 3F; 906-10, Iui-dong,  
Yeongtong-gu; Suwon-si; Gyeonggi-do; REPUBLIC OF KOREA 472-732

hereafter referred to as assignor, have with others invented certain new and useful improvements in  
**GaN SINGLE CRYSTAL SUBSTRATE AND METHOD FOR PROCESSING SURFACE OF**  
**GaN SINGLE CRYSTAL SUBSTRATE**

- ☒ for which an application for a United States Letters Patent was filed on October 29, 2007  
 Application Number 11/978,547
- ☒ for which an application for a United States Letters Patent was executed by me on \_\_\_\_\_
- ☒ for which an International Application was filed on \_\_\_\_\_, as

\_\_\_\_\_, designating the United States.

And

Whereas, Samsung Corning Co., Ltd.

a corporation of Korea, Republic of herein referred to as "assignee" whose mailing address is

472, Sin-dong, Yeongtong-gu; Suwon-si, Gyeonggi-do; REPUBLIC OF KOREA 443-732

is desirous of acquiring the entire right, title and interest in the same;

NOW, THEREFORE, in consideration of the sum of one dollars (\$ 1.00 ), the receipt whereof is acknowledged, and other good and valuable consideration, I as assignor hereby sell, assign and set over to said assignee my entire right, title and interest for the United States of America and all other countries in and to said invention and the aforesaid utility patent application and all original, divisional, continuation, substitute or reissue applications and patents applied for or granted therefor in the United States of America and all other countries, for said invention, including without limitation all applications and patents for said invention claiming priority or benefit of the aforesaid utility application pursuant to any law or treaty, and including all claims for damages by reason of past infringement with the right to sue for and collect the same for its own use and the use of its successors, assigns and legal representatives, and including the right to claim such priority or benefit and the Commissioner of Patents and Trademarks is hereby authorized and requested to issue all patents on said improvements or resulting therefrom to said assignee herein, as assignee of the entire interest therein; and the undersigned for me and my legal representatives, heirs and assigns do hereby agree and covenant without further remuneration, to execute and deliver all original, divisional, continuation, reissue and other applications for Letters Patent on said improvements and all assignments thereof to said assignee or its assigns, to communicate to said assignee or its representatives all facts known to the undersigned respecting said improvements, whenever requested, to testify in any interferences or other legal proceedings in which any of said applications or patents may become involved, to sign all lawful papers, make all rightful oaths, and to do generally everything necessary to aid assignee, its successors, assigns and nominees to obtain patent protection for said improvements in all countries, the expenses incident to said applications to be borne and paid by said assignee.

And I do hereby authorize my attorneys to insert on this deed the filing date and application number of said application when known.

Dec. 10, 2007  
 Date

Jin Suk Jeong  
 Jin Suk JEONG

Ik Bae Lee  
 Witness

Ik Bae LEE  
 Typed Name of Witness

☒ \*Total of 5 forms are submitted.

former PTO/SB/15 (8-00) Modified LDLK&amp;M

**ASSIGNMENT OF UTILITY APPLICATION**

Docket Number (Optional)

SAMSUN 3.0-032

Whereas, I, Ki Soo LEE of  
c/o Samsung Corning Co., Ltd.; Korea Advanced Nano Fab Center 3F; 906-10, Iui-dong,  
Yeongtong-gu; Suwon-si; Gyeonggi-do; REPUBLIC OF KOREA 472-732

hereafter referred to as assignor, have with others invented certain new and useful improvements in  
**GaN SINGLE CRYSTAL SUBSTRATE AND METHOD FOR PROCESSING SURFACE OF**  
**GaN SINGLE CRYSTAL SUBSTRATE**

- ☒ for which an application for a United States Letters Patent was filed on October 29, 2007  
 Application Number 11/978,547
- ☒ for which an application for a United States Letters Patent was executed by me on \_\_\_\_\_
- ☒ for which an International Application was filed on \_\_\_\_\_, as

\_\_\_\_\_, designating the United States.

And

Whereas, Samsung Corning Co., Ltd.

a corporation of Korea, Republic of herein referred to as "assignee" whose mailing address is  
472, Sin-dong, Yeongtong-gu; Suwon-si, Gyeonggi-do; REPUBLIC OF KOREA 443-732

is desirous of acquiring the entire right, title and interest in the same:

NOW, THEREFORE, in consideration of the sum of one dollars (\$ 1.00 ), the receipt whereof is acknowledged, and other good and valuable consideration, I as assignor hereby sell, assign and set over to said assignee my entire right, title and interest for the United States of America and all other countries in and to said invention and the aforesaid utility patent application and all original, divisional, continuation, substitute or reissue applications and patents applied for or granted therefor in the United States of America and all other countries, for said invention, including without limitation all applications and patents for said invention claiming priority or benefit of the aforesaid utility application pursuant to any law or treaty, and including all claims for damages by reason of past infringement with the right to sue for and collect the same for its own use and the use of its successors, assigns and legal representatives, and including the right to claim such priority or benefit and the Commissioner of Patents and Trademarks is hereby authorized and requested to issue all patents on said improvements or resulting therefrom to said assignee herein, as assignee of the entire interest therein; and the undersigned for me and my legal representatives, heirs and assigns do hereby agree and covenant without further remuneration, to execute and deliver all original, divisional, continuation, reissue and other applications for Letters Patent on said improvements and all assignments thereof to said assignee or its assigns, to communicate to said assignee or its representatives all facts known to the undersigned respecting said improvements, whenever requested, to testify in any interferences or other legal proceedings in which any of said applications or patents may become involved, to sign all lawful papers, make all rightful oaths, and to do generally everything necessary to aid assignee, its successors, assigns and nominees to obtain patent protection for said improvements in all countries, the expenses incident to said applications to be borne and paid by said assignee.

And I do hereby authorize my attorneys to insert on this deed the filing date and application number of said application when known.

Dec. 10, 2007

Date

Ki Soo Lee

Ki Soo LEE

Ik Bae Lee

Witness

Ik Bae LEE

Typed Name of Witness

☒

\*Total of 5 forms are submitted.

former PTO/SB/15 (6-00) Modified LDLK&amp;M

**ASSIGNMENT OF UTILITY APPLICATION**

Docket Number (Optional)

SAMSUN 3.0-032

Whereas, I, Kyoung Jun KIM of  
c/o Samsung Corning Co., Ltd.; Korea Advanced Nano Fab Center 3F; 906-10, Iui-dong,  
Yeongtong-gu; Suwon-si; Gyeonggi-do; REPUBLIC OF KOREA 472-732

hereafter referred to as assignor, have with others invented certain new and useful improvements in  
**GaN SINGLE CRYSTAL SUBSTRATE AND METHOD FOR PROCESSING SURFACE OF**  
**GaN SINGLE CRYSTAL SUBSTRATE**

- ☒ for which an application for a United States Letters Patent was filed on October 29, 2007  
 Application Number 11/978,547
- ☒ for which an application for a United States Letters Patent was executed by me on \_\_\_\_\_
- ☒ for which an International Application was filed on \_\_\_\_\_, as

\_\_\_\_\_, designating the United States.

And

Whereas, Samsung Corning Co., Ltd.

a corporation of Korea, Republic of herein referred to as "assignee" whose mailing address is

472, Sin-dong, Yeongtong-gu; Suwon-si, Gyeonggi-do; REPUBLIC OF KOREA 443-732

is desirous of acquiring the entire right, title and interest in the same;

NOW, THEREFORE, in consideration of the sum of one dollars (\$ 1.00 ), the receipt whereof is acknowledged, and other good and valuable consideration, I as assignor hereby sell, assign and set over to said assignee my entire right, title and interest for the United States of America and all other countries in and to said invention and the aforesaid utility patent application and all original, divisional, continuation, substitute or reissue applications and patents applied for or granted therefor in the United States of America and all other countries, for said invention, including without limitation all applications and patents for said invention claiming priority or benefit of the aforesaid utility application pursuant to any law or treaty, and including all claims for damages by reason of past infringement with the right to sue for and collect the same for its own use and the use of its successors, assigns and legal representatives, and including the right to claim such priority or benefit and the Commissioner of Patents and Trademarks is hereby authorized and requested to issue all patents on said improvements or resulting therefrom to said assignee herein, as assignee of the entire interest therein; and the undersigned for me and my legal representatives, heirs and assigns do hereby agree and covenant without further remuneration, to execute and deliver all original, divisional, continuation, reissue and other applications for Letters Patent on said improvements and all assignments thereof to said assignee or its assigns, to communicate to said assignee or its representatives all facts known to the undersigned respecting said improvements, whenever requested, to testify in any interferences or other legal proceedings in which any of said applications or patents may become involved, to sign all lawful papers, make all rightful oaths, and to do generally everything necessary to aid assignee, its successors, assigns and nominees to obtain patent protection for said improvements in all countries, the expenses incident to said applications to be borne and paid by said assignee.

And I do hereby authorize my attorneys to insert on this deed the filing date and application number of said application when known.

Dec. 10, 2007  
 Date

Kyoung Jun Kim  
 Kyoung Jun KIM

Ik Bae Lee  
 Witness

Ik Bae LEE

Typed Name of Witness

☒ \*Total of 5 forms are submitted.

PATENT

REEL: 020375 FRAME: 0883

former PTO/SB/15 (6-00) Modified LDLK&amp;M

**ASSIGNMENT OF UTILITY APPLICATION**

Docket Number (Optional)

SAMSUN 3.0-032

Whereas, I, Ju Heon LEE ofSamsung Corning Co., Ltd.; Korea Advanced Nano Fab Center 3F; 906-10, Iui-dong, Yeongtong-gu; Suwon-Si; Gyeonggi-do; REPUBLIC OF KOREA 472-732hereafter referred to as assignor, have with others invented certain new and useful improvements in  
**GaN SINGLE CRYSTAL SUBSTRATE AND METHOD FOR PROCESSING SURFACE OF  
GaN SINGLE CRYSTAL SUBSTRATE**

- ☒ for which an application for a United States Letters Patent was filed on October 29, 2007  
Application Number 11/978,547
- ☒ for which an application for a United States Letters Patent was executed by me on \_\_\_\_\_
- ☒ for which an International Application was filed on \_\_\_\_\_, as  
\_\_\_\_\_, designating the United States.

And

Whereas, Samsung Corning Co., Ltd.a corporation of Korea, Republic of herein referred to as "assignee" whose mailing address is  
472, Sin-dong, Yeongtong-gu; Suwon-Si, Gyeonggi-Do; REPUBLIC OF KOREA 443-732

is desirous of acquiring the entire right, title and interest in the same;

NOW, THEREFORE, in consideration of the sum of one dollars (\$ 1.00 ), the receipt whereof is acknowledged, and other good and valuable consideration, I as assignor hereby sell, assign and set over to said assignee my entire right, title and interest for the United States of America and all other countries in and to said invention and the aforesaid utility patent application and all original, divisional, continuation, substitute or reissue applications and patents applied for or granted therefor in the United States of America and all other countries, for said invention, including without limitation all applications and patents for said invention claiming priority or benefit of the aforesaid utility application pursuant to any law or treaty, and including all claims for damages by reason of past infringement with the right to sue for and collect the same for its own use and the use of its successors, assigns and legal representatives, and including the right to claim such priority or benefit and the Commissioner of Patents and Trademarks is hereby authorized and requested to issue all patents on said improvements or resulting therefrom to said assignee herein, as assignee of the entire interest therein; and the undersigned for me and my legal representatives, heirs and assigns do hereby agree and covenant without further remuneration, to execute and deliver all original, divisional, continuation, reissue and other applications for Letters Patent on said improvements and all assignments thereof to said assignee or its assigns, to communicate to said assignee or its representatives all facts known to the undersigned respecting said improvements, whenever requested, to testify in any interferences or other legal proceedings in which any of said applications or patents may become involved, to sign all lawful papers, make all rightful oaths, and to do generally everything necessary to aid assignee, its successors, assigns and nominees to obtain patent protection for said improvements in all countries, the expenses incident to said applications to be borne and paid by said assignee.

And I do hereby authorize my attorneys to insert on this deed the filing date and application number of said application when known.

Dec. 10, 2007

Date

Ju Heon Lee

Ju Heon LEE

Ik Bae Lee

Witness

Ik Bae LEE

Typed Name of Witness

☒ \*Total of 5 forms are submitted.

PATENT

REEL: 020375 FRAME: 0884

former PTO/SB/16 (8-00) Modified LDLK&amp;M

**ASSIGNMENT OF UTILITY APPLICATION**

Docket Number (Optional)

SAMSUN 3.0-032

Whereas, I, Chang Uk JIN ofc/o Samsung Corning Co., Ltd.; Korea Advanced Nano Fab Center 3F; 906-10, Jui-dong,  
Yeongtong-gu; Suwon-si; Gyeonggi-do; REPUBLIC OF KOREA 472-732hereafter referred to as assignor, have with others invented certain new and useful improvements in  
**GAN SINGLE CRYSTAL SUBSTRATE AND METHOD FOR PROCESSING SURFACE OF**  
**GAN SINGLECRYSTAL SUBSTRATE**☒ for which an application for a United States Letters Patent was filed on October 29, 2007Application Number 11/978,547☒ for which an application for a United States Letters Patent was executed by me on \_\_\_\_\_☒ for which an International Application was filed on \_\_\_\_\_, as

\_\_\_\_\_, designating the United States.

And

Whereas, Samsung Corning Co., Ltd.a corporation of Korea, Republic of herein referred to as "assignee" whose mailing address is472, Sin-dong, Yeongtong-gu; Suwon-si; Gyeonggi-do; REPUBLIC OF KOREA 443-732

is desirous of acquiring the entire right, title and interest in the same;

NOW, THEREFORE, In consideration of the sum of one dollars (\$ 1.00 ), the receipt whereof is acknowledged, and other good and valuable consideration, I as assignor hereby sell, assign and set over to said assignee my entire right, title and interest for the United States of America and all other countries in and to said invention and the aforesaid utility patent application and all original, divisional, continuation, substitute or reissue applications and patents applied for or granted therefor in the United States of America and all other countries, for said invention, including without limitation all applications and patents for said invention claiming priority or benefit of the aforesaid utility application pursuant to any law or treaty, and including all claims for damages by reason of past infringement with the right to sue for and collect the same for its own use and the use of its successors, assigns and legal representatives, and including the right to claim such priority or benefit and the Commissioner of Patents and Trademarks is hereby authorized and requested to issue all patents on said improvements or resulting therefrom to said assignee herein, as assignee of the entire interest therein; and the undersigned for me and my legal representatives, heirs and assigns do hereby agree and covenant without further remuneration, to execute and deliver all original, divisional, continuation, reissue and other applications for Letters Patent on said improvements and all assignments thereof to said assignee or its assigns, to communicate to said assignee or its representatives all facts known to the undersigned respecting said improvements, whenever requested, to testify in any interferences or other legal proceedings in which any of said applications or patents may become involved, to sign all lawful papers, make all rightful oaths, and to do generally everything necessary to aid assignee, its successors, assigns and nominees to obtain patent protection for said improvements in all countries, the expenses incident to said applications to be borne and paid by said assignee.

And I do hereby authorize my attorneys to insert on this deed the filing date and application number of said application when known.

Dec. 10, 2007

Date

Chang Uk Jin

Chang Uk JIN

Ik Bae Lee  
Witness

Ik Bae LEE

Typed Name of Witness

☒ \*Total of 5 forms are submitted.

PATENT

RECORDED: 01/16/2008

REEL: 020375 FRAME: 0885