

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
Stylesheet Version v1.2

EPAS ID: PAT5647938

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
ZHIDONG YUAN	03/28/2019
YONGQIAN LI	03/28/2019
CAN YUAN	03/28/2019
MENG LI	03/28/2019
XUELIAN CHENG	03/28/2019

RECEIVING PARTY DATA

Name:	HEFEI XINSHENG OPTOELECTRONICS TECHNOLOGY CO., LTD.
Street Address:	XINZHAN INDUSTRIAL PARK
Internal Address:	ANHUI
City:	HEFEI
State/Country:	CHINA
Postal Code:	230012
Name:	BOE TECHNOLOGY GROUP CO., LTD.
Street Address:	NO. 10 JIUXIANQIAO RD
Internal Address:	CHAOYANG DISTRICT
City:	BEIJING
State/Country:	CHINA
Postal Code:	100015

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	16504652

CORRESPONDENCE DATA

Fax Number: (770)951-0933

Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.

Phone: 7709339500

Email: Joy.Neu@thomashorstemeyer.com

Correspondent Name: THOMAS HORSTEMEYER, LLP

Address Line 1: 3200 WINDY HILL ROAD SE

Address Line 2: SUITE 1600E

PATENT

Address Line 4: ATLANTA, GEORGIA 30339

ATTORNEY DOCKET NUMBER: 100601-1610

NAME OF SUBMITTER: KENNETH A. KNOX

SIGNATURE: /Kenneth A. Knox/

DATE SIGNED: 08/01/2019

Total Attachments: 10

source=100601-1610_Executed_Dec-Assign#page1.tif
source=100601-1610_Executed_Dec-Assign#page2.tif
source=100601-1610_Executed_Dec-Assign#page3.tif
source=100601-1610_Executed_Dec-Assign#page4.tif
source=100601-1610_Executed_Dec-Assign#page5.tif
source=100601-1610_Executed_Dec-Assign#page6.tif
source=100601-1610_Executed_Dec-Assign#page7.tif
source=100601-1610_Executed_Dec-Assign#page8.tif
source=100601-1610_Executed_Dec-Assign#page9.tif
source=100601-1610_Executed_Dec-Assign#page10.tif

**COMBINED DECLARATION (37 CFR 1.63) FOR UTILITY OR
DESIGN APPLICATION USING AN APPLICATION DATA SHEET
(37 CFR 1.76) AND ASSIGNMENT**

Title of Invention	SHIFT REGISTER UNIT AND GATE DRIVE CIRCUIT
As a below named inventor, I hereby declare that:	
This declaration	
is directed to:	<input checked="" type="checkbox"/> The attached application, or
	<input type="checkbox"/> United States application or PCT international application number _____ filed on _____
The above-identified application was made or authorized to be made by me.	
I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.	
I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.	

FOR GOOD AND VALUABLE CONSIDERATION, the receipt, sufficiency and adequacy of which are hereby acknowledged, each undersigned inventor (hereinafter referred to as "ASSIGNOR"), do hereby:

SELL, ASSIGN AND TRANSFER to Hefei Xinsheng Optoelectronics Technology Co., Ltd., having a place of business at Xinzhan Industrial Park, Hefei, Anhui, 230012, P.R.China, and BOE TECHNOLOGY GROUP CO., LTD., having a place of business at No.10 Jiuxiangqiao Rd., Chaoyang District, Beijing, 100015, P.R. China (each hereinafter referred to as "ASSIGNEE"), the entire right, title and interest for the United States and all foreign countries in and to any and all inventions which are disclosed in the above-identified application for United States Letters Patent, which has been executed by the undersigned concurrently herewith, which claims priority to CN201810846834.2 filed on Jul.27,2018; such applications and all divisional, continuing, substitute, renewal, reissue and all other applications for patent which have been or shall be filed in the United States and all foreign countries on any of such inventions; all original and reissued patents which have been or shall be issued in the United States and all foreign countries on such inventions; and specifically including the right to file foreign applications under the provisions of any convention or treaty and claim priority based on such application in the United States;

AUTHORIZE AND REQUEST the issuing authority to issue any and all United States and foreign patents granted on such inventions to the Assignee;

WARRANT AND COVENANT that no assignment, grant, mortgage, license or other agreement affecting the rights and property herein conveyed has been or will be made to others by the undersigned, and that the full right to convey the same as herein expressed is possessed by the undersigned;

COVENANT, when requested and at the expense of the Assignee, to carry out in good faith the intent and purpose of this assignment, the undersigned will execute all divisional, continuing, substitute, renewal, reissue, and all other patent applications on any and all such inventions; execute all rightful oaths, declarations, assignments, powers of attorney and other papers; communicate to the Assignee all facts known to the undersigned relating to such inventions and the history thereof; and generally do everything possible which the Assignee shall consider desirable for vesting title to such inventions in the Assignee, and for securing, maintaining and enforcing proper patent protection for such inventions;

TO BE BINDING on the heirs; assigns, representatives and successors of the undersigned and extend to the successors, assigns and nominees of the Assignee.

ASSIGNOR HEREBY REPRESENTS AND WARRANTS that ASSIGNOR has the full and unencumbered right to sell, assign, and transfer the interests sold, assigned, and transferred herein, and that ASSIGNOR has not executed and will not execute any document or instrument in conflict herewith.

ASSIGNOR HEREBY GRANTS to the agents and attorneys of _____ the power and authority to insert in this Assignment any further identification which may be necessary or desirable to comply with the rules of the U.S. Patent and Trademark Office for recordation of this Assignment.

The assignment of said invention is effective as of the earlier of (1) the date of execution shown below or (2) the filing date of the first filed of said patent applications.

STATEMENTS

I have reviewed and understand the contents of the above-identified application, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose to the United States Patent Office all information known to me to be material to patentability as defined in 37 C.F.R. 1.56, including for continuation-in-part applications, material information which became available between the filing date of the prior application and the national or PCT international filing date of the continuation-in-part.

LEGAL NAME OF INVENTOR	
Inventor: Zhidong YUAN	Date: Mar. 28, 2019
Signature: Zhidong YUAN	

**COMBINED DECLARATION (37 CFR 1.63) FOR UTILITY OR
DESIGN APPLICATION USING AN APPLICATION DATA SHEET
(37 CFR 1.76) AND ASSIGNMENT**

Title of Invention	SHIFT REGISTER UNIT AND GATE DRIVE CIRCUIT
As a below named inventor, I hereby declare that:	
This declaration	
is directed to:	<input checked="" type="checkbox"/> The attached application, or
	<input type="checkbox"/> United States application or PCT international application number _____ filed on _____
The above-identified application was made or authorized to be made by me.	
I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.	
I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.	

FOR GOOD AND VALUABLE CONSIDERATION, the receipt, sufficiency and adequacy of which are hereby acknowledged, each undersigned inventor (hereinafter referred to as "ASSIGNOR"), do hereby:

SELL, ASSIGN AND TRANSFER to Hefei Xinsheng Optoelectronics Technology Co., Ltd., having a place of business at Xinzhan Industrial Park, Hefei, Anhui, 230012, P.R.China, and BOE TECHNOLOGY GROUP CO., LTD., having a place of business at No.10 Jiuxiangqiao Rd., Chaoyang District, Beijing, 100015, P.R. China (each hereinafter referred to as "ASSIGNEE"), the entire right, title and interest for the United States and all foreign countries in and to any and all inventions which are disclosed in the above-identified application for United States Letters Patent, which has been executed by the undersigned concurrently herewith, which claims priority to CN201810846834.2 filed on Jul.27.2018; such applications and all divisional, continuing, substitute, renewal, reissue and all other applications for patent which have been or shall be filed in the United States and all foreign countries on any of such inventions; all original and reissued patents which have been or shall be issued in the United States and all foreign countries on such inventions; and specifically including the right to file foreign applications under the provisions of any convention or treaty and claim priority based on such application in the United States;

AUTHORIZE AND REQUEST the issuing authority to issue any and all United States and foreign patents granted on such inventions to the Assignee;

WARRANT AND COVENANT that no assignment, grant, mortgage, license or other agreement affecting the rights and property herein conveyed has been or will be made to others by the undersigned, and that the full right to convey the same as herein expressed is possessed by the undersigned;

COVENANT, when requested and at the expense of the Assignee, to carry out in good faith the intent and purpose of this assignment, the undersigned will execute all divisional, continuing, substitute, renewal, reissue, and all other patent applications on any and all such inventions; execute all rightful oaths, declarations, assignments, powers of attorney and other papers; communicate to the Assignee all facts known to the undersigned relating to such inventions and the history thereof; and generally do everything possible which the Assignee shall consider desirable for vesting title to such inventions in the Assignee, and for securing, maintaining and enforcing proper patent protection for such inventions;

TO BE BINDING on the heirs; assigns, representatives and successors of the undersigned and extend to the successors, assigns and nominees of the Assignee.

ASSIGNOR HEREBY REPRESENTS AND WARRANTS that ASSIGNOR has the full and unencumbered right to sell, assign, and transfer the interests sold, assigned, and transferred herein, and that ASSIGNOR has not executed and will not execute any document or instrument in conflict herewith.

ASSIGNOR HEREBY GRANTS to the agents and attorneys of _____ the power and authority to insert in this Assignment any further identification which may be necessary or desirable to comply with the rules of the U.S. Patent and Trademark Office for recordation of this Assignment.

The assignment of said invention is effective as of the earlier of (1) the date of execution shown below or (2) the filing date of the first filed of said patent applications.

STATEMENTS

I have reviewed and understand the contents of the above-identified application, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose to the United States Patent Office all information known to me to be material to patentability as defined in 37 C.F.R. 1.56, including for continuation-in-part applications, material information which became available between the filing date of the prior application and the national or PCT international filing date of the continuation-in-part.

LEGAL NAME OF INVENTOR	
Inventor: Yongqian LI	Date: Mar. 28, 2019
Signature: <u>Yongqian LI</u>	

**COMBINED DECLARATION (37 CFR 1.63) FOR UTILITY OR
DESIGN APPLICATION USING AN APPLICATION DATA SHEET
(37 CFR 1.76) AND ASSIGNMENT**

Title of Invention	SHIFT REGISTER UNIT AND GATE DRIVE CIRCUIT
As a below named inventor, I hereby declare that:	
This declaration	
is directed to:	<input checked="" type="checkbox"/> The attached application, or
	<input type="checkbox"/> United States application or PCT international application number _____ filed on _____
The above-identified application was made or authorized to be made by me.	
I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.	
I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.	

FOR GOOD AND VALUABLE CONSIDERATION, the receipt, sufficiency and adequacy of which are hereby acknowledged, each undersigned inventor (hereinafter referred to as "ASSIGNOR"), do hereby:

SELL, ASSIGN AND TRANSFER to Hefei Xinsheng Optoelectronics Technology Co., Ltd., having a place of business at Xinzhan Industrial Park, Hefei, Anhui, 230012, P.R.China, and BOE TECHNOLOGY GROUP CO., LTD., having a place of business at No.10 Jiuxiangqiao Rd., Chaoyang District, Beijing, 100015, P.R. China (each hereinafter referred to as "ASSIGNEE"), the entire right, title and interest for the United States and all foreign countries in and to any and all inventions which are disclosed in the above-identified application for United States Letters Patent, which has been executed by the undersigned concurrently herewith, which claims priority to CN201810846834.2 filed on Jul.27.2018; such applications and all divisional, continuing, substitute, renewal, reissue and all other applications for patent which have been or shall be filed in the United States and all foreign countries on any of such inventions; all original and reissued patents which have been or shall be issued in the United States and all foreign countries on such inventions; and specifically including the right to file foreign applications under the provisions of any convention or treaty and claim priority based on such application in the United States;

AUTHORIZE AND REQUEST the issuing authority to issue any and all United States and foreign patents granted on such inventions to the Assignee;

WARRANT AND COVENANT that no assignment, grant, mortgage, license or other agreement affecting the rights and property herein conveyed has been or will be made to others by the undersigned, and that the full right to convey the same as herein expressed is possessed by the undersigned;

COVENANT, when requested and at the expense of the Assignee, to carry out in good faith the intent and purpose of this assignment, the undersigned will execute all divisional, continuing, substitute, renewal, reissue, and all other patent applications on any and all such inventions; execute all rightful oaths, declarations, assignments, powers of attorney and other papers; communicate to the Assignee all facts known to the undersigned relating to such inventions and the history thereof; and generally do everything possible which the Assignee shall consider desirable for vesting title to such inventions in the Assignee, and for securing, maintaining and enforcing proper patent protection for such inventions;

TO BE BINDING on the heirs; assigns, representatives and successors of the undersigned and extend to the successors, assigns and nominees of the Assignee.

ASSIGNOR HEREBY REPRESENTS AND WARRANTS that ASSIGNOR has the full and unencumbered right to sell, assign, and transfer the interests sold, assigned, and transferred herein, and that ASSIGNOR has not executed and will not execute any document or instrument in conflict herewith.

ASSIGNOR HEREBY GRANTS to the agents and attorneys of _____ the power and authority to insert in this Assignment any further identification which may be necessary or desirable to comply with the rules of the U.S. Patent and Trademark Office for recordation of this Assignment.

The assignment of said invention is effective as of the earlier of (1) the date of execution shown below or (2) the filing date of the first filed of said patent applications.

STATEMENTS

I have reviewed and understand the contents of the above-identified application, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose to the United States Patent Office all information known to me to be material to patentability as defined in 37 C.F.R. 1.56, including for continuation-in-part applications, material information which became available between the filing date of the prior application and the national or PCT international filing date of the continuation-in-part.

LEGAL NAME OF INVENTOR	
Inventor: <u>Can YUAN</u>	Date: <u>Mar. 28, 2019</u>
Signature: <u>Can YUAN</u>	

**COMBINED DECLARATION (37 CFR 1.63) FOR UTILITY OR
DESIGN APPLICATION USING AN APPLICATION DATA SHEET
(37 CFR 1.76) AND ASSIGNMENT**

Title of Invention	SHIFT REGISTER UNIT AND GATE DRIVE CIRCUIT
As a below named inventor, I hereby declare that:	
This declaration	
is directed to:	<input checked="" type="checkbox"/> The attached application, or
	<input type="checkbox"/> United States application or PCT international application number _____ filed on _____
The above-identified application was made or authorized to be made by me.	
I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.	
I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.	

FOR GOOD AND VALUABLE CONSIDERATION, the receipt, sufficiency and adequacy of which are hereby acknowledged, each undersigned inventor (hereinafter referred to as "ASSIGNOR"), do hereby:

SELL, ASSIGN AND TRANSFER to Hefei Xinsheng Optoelectronics Technology Co., Ltd., having a place of business at Xinzhan Industrial Park, Hefei, Anhui, 230012, P.R.China, and BOE TECHNOLOGY GROUP CO., LTD., having a place of business at No.10 Jiuxiangqiao Rd., Chaoyang District, Beijing, 100015, P.R. China (each hereinafter referred to as "ASSIGNEE"), the entire right, title and interest for the United States and all foreign countries in and to any and all inventions which are disclosed in the above-identified application for United States Letters Patent, which has been executed by the undersigned concurrently herewith, which claims priority to CN201810846834.2 filed on Jul.27,2018; such applications and all divisional, continuing, substitute, renewal, reissue and all other applications for patent which have been or shall be filed in the United States and all foreign countries on any of such inventions; all original and reissued patents which have been or shall be issued in the United States and all foreign countries on such inventions; and specifically including the right to file foreign applications under the provisions of any convention or treaty and claim priority based on such application in the United States;

AUTHORIZE AND REQUEST the issuing authority to issue any and all United States and foreign patents granted on such inventions to the Assignee;

WARRANT AND COVENANT that no assignment, grant, mortgage, license or other agreement affecting the rights and property herein conveyed has been or will be made to others by the undersigned, and that the full right to convey the same as herein expressed is possessed by the undersigned;

COVENANT, when requested and at the expense of the Assignee, to carry out in good faith the intent and purpose of this assignment, the undersigned will execute all divisional, continuing, substitute, renewal, reissue, and all other patent applications on any and all such inventions; execute all rightful oaths, declarations, assignments, powers of attorney and other papers; communicate to the Assignee all facts known to the undersigned relating to such inventions and the history thereof; and generally do everything possible which the Assignee shall consider desirable for vesting title to such inventions in the Assignee, and for securing, maintaining and enforcing proper patent protection for such inventions;

TO BE BINDING on the heirs, assigns, representatives and successors of the undersigned and extend to the successors, assigns and nominees of the Assignee.

ASSIGNOR HEREBY REPRESENTS AND WARRANTS that ASSIGNOR has the full and unencumbered right to sell, assign, and transfer the interests sold, assigned, and transferred herein, and that ASSIGNOR has not executed and will not execute any document or instrument in conflict herewith.

ASSIGNOR HEREBY GRANTS to the agents and attorneys of _____ the power and authority to insert in this Assignment any further identification which may be necessary or desirable to comply with the rules of the U.S. Patent and Trademark Office for recordation of this Assignment.

The assignment of said invention is effective as of the earlier of (1) the date of execution shown below or (2) the filing date of the first filed of said patent applications.

STATEMENTS

I have reviewed and understand the contents of the above-identified application, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose to the United States Patent Office all information known to me to be material to patentability as defined in 37 C.F.R. 1.56, including for continuation-in-part applications, material information which became available between the filing date of the prior application and the national or PCT international filing date of the continuation-in-part.

LEGAL NAME OF INVENTOR	
Inventor: <u>Meng LI</u>	Date: <u>Mar. 28, 2019</u>
Signature: <u>Meng LI</u>	

**COMBINED DECLARATION (37 CFR 1.63) FOR UTILITY OR
DESIGN APPLICATION USING AN APPLICATION DATA SHEET
(37 CFR 1.76) AND ASSIGNMENT**

Title of Invention	SHIFT REGISTER UNIT AND GATE DRIVE CIRCUIT
As a below named inventor, I hereby declare that:	
This declaration	
is directed to:	<input checked="" type="checkbox"/> The attached application, or
	<input type="checkbox"/> United States application or PCT international application number _____ filed on _____
The above-identified application was made or authorized to be made by me.	
I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.	
I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.	

FOR GOOD AND VALUABLE CONSIDERATION, the receipt, sufficiency and adequacy of which are hereby acknowledged, each undersigned inventor (hereinafter referred to as "ASSIGNOR"), do hereby:

SELL, ASSIGN AND TRANSFER to Hefei Xinsheng Optoelectronics Technology Co., Ltd., having a place of business at Xinzhan Industrial Park, Hefei, Anhui, 230012, P.R.China, and BOE TECHNOLOGY GROUP CO., LTD., having a place of business at No.10 Jiuxiangqiao Rd., Chaoyang District, Beijing, 100015, P.R. China (each hereinafter referred to as "ASSIGNEE"), the entire right, title and interest for the United States and all foreign countries in and to any and all inventions which are disclosed in the above-identified application for United States Letters Patent, which has been executed by the undersigned concurrently herewith, which claims priority to CN201810846834.2 filed on Jul.27,2018; such applications and all divisional, continuing, substitute, renewal, reissue and all other applications for patent which have been or shall be filed in the United States and all foreign countries on any of such inventions; all original and reissued patents which have been or shall be issued in the United States and all foreign countries on such inventions; and specifically including the right to file foreign applications under the provisions of any convention or treaty and claim priority based on such application in the United States;

AUTHORIZE AND REQUEST the issuing authority to issue any and all United States and foreign patents granted on such inventions to the Assignee;

WARRANT AND COVENANT that no assignment, grant, mortgage, license or other agreement affecting the rights and property herein conveyed has been or will be made to others by the undersigned, and that the full right to convey the same as herein expressed is possessed by the undersigned;

COVENANT, when requested and at the expense of the Assignee, to carry out in good faith the intent and purpose of this assignment, the undersigned will execute all divisional, continuing, substitute, renewal, reissue, and all other patent applications on any and all such inventions; execute all rightful oaths, declarations, assignments, powers of attorney and other papers; communicate to the Assignee all facts known to the undersigned relating to such inventions and the history thereof; and generally do everything possible which the Assignee shall consider desirable for vesting title to such inventions in the Assignee, and for securing, maintaining and enforcing proper patent protection for such inventions;

TO BE BINDING on the heirs, assigns, representatives and successors of the undersigned and extend to the successors, assigns and nominees of the Assignee.

ASSIGNOR HEREBY REPRESENTS AND WARRANTS that ASSIGNOR has the full and unencumbered right to sell, assign, and transfer the interests sold, assigned, and transferred herein, and that ASSIGNOR has not executed and will not execute any document or instrument in conflict herewith.

ASSIGNOR HEREBY GRANTS to the agents and attorneys of _____ the power and authority to insert in this Assignment any further identification which may be necessary or desirable to comply with the rules of the U.S. Patent and Trademark Office for recordation of this Assignment.

The assignment of said invention is effective as of the earlier of (1) the date of execution shown below or (2) the filing date of the first filed of said patent applications.

STATEMENTS

I have reviewed and understand the contents of the above-identified application, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose to the United States Patent Office all information known to me to be material to patentability as defined in 37 C.F.R. 1.56, including for continuation-in-part applications, material information which became available between the filing date of the prior application and the national or PCT international filing date of the continuation-in-part.

LEGAL NAME OF INVENTOR	
Inventor: Xuellian CHENG	Date: Mar. 28, 2019
Signature: Xuellian CHENG	