504290915 03/27/2017

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT4337595

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
TOSHIO HATA	03/16/2017
MAKOTO AGATANI	03/16/2017
TOYONORI UEMURA	03/15/2017
SHINYA ISHIZAKI	03/21/2017
HITOSHI MATSUSHITA	03/16/2017

RECEIVING PARTY DATA

Name:	SHARP KABUSHIKI KAISHA
Street Address:	1 TAKUMI-CHO, SAKAI-KU
City:	SAKAI CITY, OSAKA,
State/Country:	JAPAN
Postal Code:	590-8522

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	15451787

CORRESPONDENCE DATA

Fax Number: (703)816-4100

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: 7038816-4027

Email: ptomail@nixonvan.com

Correspondent Name: H. WARREN BURNAM, JR.

Address Line 1: 901 N. GLEBE ROAD, 11TH FLOOR

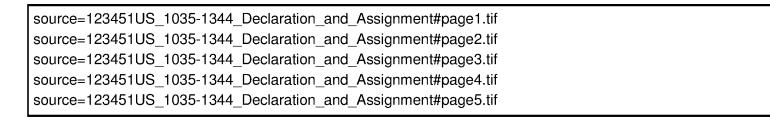
Address Line 4: ARLINGTON, VIRGINIA 22203

ATTORNEY DOCKET NUMBER:	HWB-1035-1344
NAME OF SUBMITTER:	H. WARREN BURNAM, JR.
SIGNATURE:	/H. Warren Burnam, Jr./
DATE SIGNED:	03/27/2017
	This document serves as an Oath/Declaration (37 CFR 1.63).
	·

Total Attachments: 5

PATENT REEL: 041750 FRAME: 0095

504290915



PATENT REEL: 041750 FRAME: 0096

Signature of witness:

Document Description: Oath or declaration filed Attorney Docket Number HWB-1035-1344 HATA, Toshio First Named Inventor INVENTOR'S DECLARATION AND ASSIGNMENT FOR UTILITY OR DESIGN PATENT APPLICATION (37 CFR 1.63) **USING AN APPLICATION DATA SHEET (37 CFR 1.76)** Declaration Submitted With Initial Filing Declaration Submitted After Initial Filing (surcharge (37 C.F.R. § 1.16(f)) required) LIGHT EMITTING DEVICE, LED LIGHT BULB, SPOT LIGHTING DEVICE, LIGHTING DEVICE, AND LIGHTING EQUIPMENT (Title of the Invention) As a below named inventor, I hereby declare that: This declaration is directed to: the attached application, or United States Application Number 15/451,787 filed March 7, 2017, or PCT International application number filed on The above-identified application was made or authorized to be made by me. I believe 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. WHEREAS, the undersigned (hereinafter ASSIGNOR), has made an invention in the Application identified above. WHEREAS, Sharp Kabushiki Kaisha (hereinafter ASSIGNEE), an entity, having an office and place of business at 1 Takumi-cho, Sakaiku, Sakai City, Osaka, Japan 590-8522, is desirous of acquiring an interest therein; NOW, THEREFORE, in consideration of Ten Dollars (\$10.00) and/or other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the said ASSIGNOR by these presents hereby sells, assigns, and transfers unto the said ASSIGNEE, its successors, assigns, and legal representatives, ASSIGNOR'S entire right, title and interest in the United States of America and all foreign countries, in and to the invention as described in the aforesaid application, and to the said application and to all subsequent applications based thereon including any and all continuations, divisions, reissues, and substitutes of said application, and all resulting patents, together with the right of priority under the International Convention for the Protection of Industrial Property, Inter-American Convention Relating to Patents, Designs and Industrial Models, and any other international agreements to which the United States of America adheres, and the ASSIGNOR hereby authorizes and requests the Commissioner of Patents and Trademarks to issue said Letters Patent to ASSIGNEE, for its interest as ASSIGNEE, its successors, assigns, and legal representatives. It is understood and agreed that ASSIGNEE'S attorneys Nixon & Vanderhye P.C. have represented only ASSIGNEE and will continue to represent only ASSIGNEE with respect to this invention; ASSIGNOR hereby agrees to transfer a like interest upon request of said ASSIGNEE, its successors, assigns, and legal representatives, and without further remuneration, in and to any improvements, and applications for patents based thereon, growing out of or related to the said invention: ASSIGNOR hereby agrees to execute any papers by ASSIGNEE, its successors, assigns, and legal representatives, deemed essential to ASSIGNEE'S full protection and title in and to the invention hereby transferred; and ASSIGNOR hereby agrees, upon request of ASSIGNEE, and without further remuneration, to execute any and all papers desired by ASSIGNEE, for the filling and granting of foreign applications and the perfecting of title thereto in ASSIGNEE. AGREED and executed as noted below: LEGAL NAME OF INVENTOR/JOINT INVENTOR: (E.g., Given Name (first and middle (if any)) and Family Name or Surname) Inventor's Signature: Date: 16,2017 Lata Witnessed by: Name:

I/We acknowledge the duty to disclose information which is material to the patentability of this application as defined in 37 CFR §1.56.

Date:

Signature of witness:

Document Description: Oath or declaration filed HWB-1035-1344 Attorney Docket Number HATA, Toshio First Named Inventor INVENTOR'S DECLARATION AND ASSIGNMENT FOR UTILITY OR DESIGN PATENT APPLICATION (37 CFR 1.63) **USING AN APPLICATION DATA SHEET (37 CFR 1.76)** Declaration Submitted With Initial Filing Declaration Submitted After Initial Filing (surcharge (37 C.F.R. § 1.16(f)) required) LIGHT EMITTING DEVICE, LED LIGHT BULB, SPOT LIGHTING DEVICE, LIGHTING DEVICE, AND LIGHTING EQUIPMENT (Title of the Invention) As a below named inventor. I hereby declare that: This declaration is directed to: the attached application, or United States Application Number 15/451,787 filed March 7, 2017, or PCT International application number filed on The above-identified application was made or authorized to be made by me. I believe 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. WHEREAS, the undersigned (hereinafter ASSIGNOR), has made an invention in the Application identified above. WHEREAS, Sharp Kabushiki Kaisha (hereinafter ASSIGNEE), an entity, having an office and place of business at 1 Takumi-cho, Sakaiku, Sakai City, Osaka, Japan 590-8522, is desirous of acquiring an interest therein; NOW, THEREFORE, in consideration of Ten Dollars (\$10.00) and/or other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the said ASSIGNOR by these presents hereby sells, assigns, and transfers unto the said ASSIGNEE, its successors, assigns, and legal representatives, ASSIGNOR'S entire right, title and interest in the United States of America and all foreign countries, in and to the invention as described in the aforesaid application, and to the said application and to all subsequent applications based thereon including any and all continuations, divisions, reissues, and substitutes of said application, and all resulting patents, together with the right of priority under the International Convention for the Protection of Industrial Property, Inter-American Convention Relating to Patents, Designs and Industrial Models, and any other international agreements to which the United States of America adheres, and the ASSIGNOR hereby authorizes and requests the Commissioner of Patents and Trademarks to issue said Letters Patent to ASSIGNEE, for its interest as ASSIGNEE, its successors, assigns, and legal representatives. It is understood and agreed that ASSIGNEE'S attorneys Nixon & Vanderhye P.C. have represented only ASSIGNEE and will continue to represent only ASSIGNEE with respect to this invention; ASSIGNOR hereby agrees to transfer a like interest upon request of said ASSIGNEE, its successors, assigns, and legal representatives, and without further remuneration, in and to any improvements, and applications for patents based thereon, growing out of or related to the said invention; ASSIGNOR hereby agrees to execute any papers by ASSIGNEE, its successors, assigns, and legal representatives, deemed essential to ASSIGNEE'S full protection and title in and to the invention hereby transferred; and ASSIGNOR hereby agrees, upon request of ASSIGNEE, and without further remuneration, to execute any and all papers desired by ASSIGNEE, for the filing and granting of foreign applications and the perfecting of title thereto in ASSIGNEE. AGREED and executed as noted below: LEGAL NAME OF INVENTOR/JOINT INVENTOR: (E.g., Given Name (first and middle (if any)) and Family Name or Surname) AGATANI Inventor's Signature: Date: akoto 2017 aara n Witnessed by: Name:

1/We acknowledge the duty to disclose information which is material to the patentability of this application as defined in 37 CFR §1.56.

Document Description: Oath or declaration filed

Attorney Docket Number HWB-1035-1344

First Named Inventor HATA, Toshio

	First Named Inventor HATA, Toshio					
INVENTOR'S DECLARATION AND ASSIGNMENT FOR UTILITY OR DESIGN PATENT APPLICATION (37 CFR 1.63) USING AN APPLICATION DATA SHEET (37 CFR 1.76)						
Declaration Submitted With Initial Filing OR						
Declaration Submitted After Initial Filing (surcharge (37 C.F.R. § 1.16	6(f)) required)					
LIGHT EMITTING DEVICE, LED LIGHT BULB, SPOT LIGHTING LIGHTING EQUIPMENT	DEVICE, LIGHTING DEVICE, AND					
(Title of the Invention)						
As a below named inventor, I hereby declare that:						
This declaration is directed to: the attached application, or United States Application Number 15/451,787 filed March 7, 2017, or PCT International application number filed on						
The above-identified application was made or authorized to be made by me.						
I believe I am the original inventor or an original joint inventor of a claimed invent	tion in the application.					
I hereby acknowledge that any willful false statement made in this declaration is by fine or imprisonment of not more than five (5) years, or both.	punishable under 18 U.S.C. 1001					
WHEREAS, the undersigned (hereinafter ASSIGNOR), has made an invention in	n the Application identified above.					
WHEREAS. Sharp Kabushiki Kaisha (hereinafter ASSIGNEE), an entity, having an office and place of business at 1 Takumi-cho, Sakai-ku, Sakai City, Osaka, Japan 590-8522, is desirous of acquiring an interest therein.						
NOW, THEREFORE, in consideration of Ten Dollars (\$10.00) and/or other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the said ASSIGNOR by these presents hereby sells, assigns, and transfers unto the said ASSIGNEE, its successors, assigns, and legal representatives, ASSIGNOR'S entire right, title and interest in the United States of America and all foreign countries, in and to the invention as described in the aforesaid application, and to the said application and to all subsequent applications based thereon including any and all continuations, divisions, reissues, and substitutes of said application, and all resulting patents, together with the right of priority under the International Convention for the Protection of Industrial Property, Inter-American Convention Relating to Patents, Designs and Industrial Models, and any other international agreements to which the United States of America adheres, and the ASSIGNOR hereby authorizes and requests the Commissioner of Patents and Trademarks to issue said Letters Patent to ASSIGNEE, for its interest as ASSIGNEE, its successors, assigns, and legal representatives. It is understood and agreed that ASSIGNEE's attomeys Nixon & Vanderhye P.C. have represented only ASSIGNEE and will continue to represent only ASSIGNEE with respect to this invention;						
ASSIGNOR hereby agrees to transfer a like interest upon request of said ASSIGNEE, its successors, assigns, and legal representatives, and without further remuneration, in and to any improvements, and applications for patents based thereon, growing out of or related to the said invention;						
ASSIGNOR hereby agrees to execute any papers by ASSIGNEE, its successors to ASSIGNEE'S full protection and title in and to the invention hereby transferred						
ASSIGNOR hereby agrees, upon request of ASSIGNEE, and without further rem ASSIGNEE, for the filing and granting of foreign applications and the perfecting of the filing and granting of foreign applications.	nuneration, to execute any and all papers desired by of title thereto in ASSIGNEE.					
AGREED and executed as noted below:						
Legal Name of Additional Joint Inventor, if any:						
(E.g., Given Name (first and middle (if any)) and Family Name or Surname) Toyonori	UEMURA					
inventor's Signature: Joyovou Comura—	- March 15th 2017					
Witnessed by:	*					
Name:						
Signature of witness:	Date					

REEL: 041750 FRAME: 0099

Doc code: Oath				
Document Description: Oath or declaration filed		The state of the s		
	Attorney Docket Number	HWB-1035-1344		
FART 7000 PROPERTY AND THE POST A DOCUMENT OF THE POST	First Named Inventor	HATA, Toshio		
INVENTOR'S DECLARATION AND ASSIGNMENT FOR UTILITY OR DESIGN PATENT APPLICATION (37 CFR 1.63) USING AN APPLICATION DATA SHEET (37 CFR 1.76) Declaration Submitted With Initial Filing OR Declaration Submitted After Initial Filing (surcharge (37 C.F.R. § 1.16(f)) required)				
LIGHT EMITTING DEVICE, LED LIGHT BULB, SPOT LIGHTING DEVICE, LIGHTING DEVICE, AND LIGHTING EQUIPMENT				
(Title of the Invention)				
As a below named inventor, I hereby declare that:				
This declaration is directed to:				
☐ the attached application, or ☐ United States Application Number 15/451.787 filed March 7, 2017, or ☐ PCT International application number filed on				
The above-identified application was made or authorized to be made by me.				
I believe I am the original inventor or an original joint inventor of a claimed inven	illion 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.				
WHEREAS, the undersigned (hereinafter ASSIGNOR), has made an invention	in the Application identified a	bove.		
WHEREAS, Sharp Kabushiki Kaisha (hereinafter ASSIGNEE), an entity, having an office and place of business at 1 Takumi-cho, Sakai-ku, Sakai City, Osaka, Japan 550-8522, is desirous of acquiring an interest therein;				
NCW, THEREFORE, in consideration of Ten Dollars (\$10.00) and/or other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the said ASSIGNOR by these presents hereby sells, assigns, and transfers unto the said ASSIGNEE, its successors, assigns, and legal representatives, ASSIGNOR'S entire right, title and interest in the United States of America and all foreign countries, in and to the invention as described in the aforesaid application, and to the said application and to all subsequent applications based thereon including any and all continuations, divisions, reissues, and substitutes of said application, and all resulting patents, together with the right of priority under the International Convention for the Protection of Industrial Property, Inter-American Convention Relating to Patents, Designs and Industrial Models, and any other international agreements to which the United States of America adheres, and the ASSIGNOR hereby authorizes and requests the Commissioner of Patents and Trademarks to issue asid Letters Patent to ASSIGNEE, for its interest as ASSIGNEE, its successors, assigns, and legal representatives. It is understood and ASSIGNEE with respect to this invention;				
ASSIGNOR hereby agrees to transfer a like interest upon request of said ASSIGNEE, its successors, assigns, and legal representatives, and without further remuneration, in and to any improvements, and applications for patents based thereon, growing out of or related to the said invention;				
ASSIGNOR hereby agrees to execute any papers by ASSIGNEE, its successors, assigns, and legal representatives, deemed essential to ASSIGNEE'S full protection and title in and to the invention hereby transferred; and				
ASSIGNOR hereby agrees, upon request of ASSIGNEE, and without further remuneration, to execute any and all papers desired by ASSIGNEE, for the filling and granting of foreign applications and the perfecting of title thereto in ASSIGNEE.				
AGREED and executed as noted below:				
Legal Name of Additional Joint Inventor, if any:				
(E.g., Given Name (first and middle (if any)) and Family Name or Surname)				

IWe acknowledge the duty to disclose information which is material to the patentability of this application as defined in 37 CFR §1.58.

inventor's

Signature:

Name:

Signature of witness:

Date:

Date:

Document Description: Oath or declaration filed HWB-1035-1344 Attorney Docket Number HATA, Toshio First Named Inventor INVENTOR'S DECLARATION AND ASSIGNMENT FOR UTILITY OR DESIGN PATENT APPLICATION (37 CFR 1.63) **USING AN APPLICATION DATA SHEET (37 CFR 1.76)** Declaration Submitted With Initial Filing OR Declaration Submitted After Initial Filing (surcharge (37 C.F.R. § 1.16(f)) required) LIGHT EMITTING DEVICE, LED LIGHT BULB, SPOT LIGHTING DEVICE, LIGHTING DEVICE, AND LIGHTING EQUIPMENT (Title of the Invention) As a below named inventor, I hereby declare that: This declaration is directed to: the attached application, or United States Application Number 15/451,787 filed March 7, 2017, or PCT International application number filed on The above-identified application was made or authorized to be made by me. I believe 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. WHEREAS, the undersigned (hereinafter ASSIGNOR), has made an invention in the Application identified above. WHEREAS, Sharp Kabushiki Kaisha (hereinafter ASSIGNEE), an entity, having an office and place of business at 1 Takumi-cho, Sakaiku, Sakai City, Osaka, Japan 590-8522, is desirous of acquiring an interest therein; NOW, THEREFORE, in consideration of Ten Dollars (\$10.00) and/or other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the said ASSIGNOR by these presents hereby sells, assigns, and transfers unto the said ASSIGNEE, its successors, assigns, and legal representatives, ASSIGNOR'S entire right, title and interest in the United States of America and all foreign countries, in and to the invention as described in the afgresaid application, and to the said application and to all subsequent applications based thereon including any and all continuations, divisions, reissues, and substitutes of said application, and all resulting patents, together with the right of priority under the International Convention for the Protection of Industrial Property, Inter-American Convention Relating to Patents, Designs and Industrial Models, and any other international agreements to which the United States of America adheres, and the ASSIGNOR hereby authorizes and requests the Commissioner of Patents and Trademarks to issue said Letters Patent to ASSIGNEE, for its interest as ASSIGNEE, its successors, assigns, and legal representatives. It is understood and agreed that ASSIGNEE'S attorneys Nixon & Vanderhye P.C. have represented only ASSIGNEE and will continue to represent only ASSIGNEE with respect to this invention: ASSIGNOR hereby agrees to transfer a like interest upon request of said ASSIGNEE, its successors, assigns, and legal representatives, and without further remuneration, in and to any improvements, and applications for patents based thereon, growing out of or related to the said invention; ASSIGNOR hereby agrees to execute any papers by ASSIGNEE, its successors, assigns, and legal representatives, deemed essential to ASSIGNEE'S full protection and title in and to the invention hereby transferred; and ASSIGNOR hereby agrees, upon request of ASSIGNEE, and without further remuneration, to execute any and all papers desired by ASSIGNEE, for the filling and granting of foreign applications and the perfecting of title thereto in ASSIGNEE. AGREED and executed as noted below: Legal Name of Additional Joint Inventor, if any: (E.g., Given Name (first and middle (if any)) and Family Name or Surname) MATSUSHITA Inventor's Matsushita Hitoshi Date: March 16, 2017 Signature: Witnessed by: Name:

I/We acknowledge the duty to disclose information which is material to the patentability of this application as defined in 37 CFR §1.56.

PATENT REEL: 041750 FRAME: 0101

RECORDED: 03/27/2017

Signature of witness: