

<b>PATENT ASSIGNMENT COVER SHEET</b>
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<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
YOSHINAO OGATA	07/29/2015
SEIKO MINAMI	07/30/2015
MASATAKA KATO	07/27/2015
MASAYA UYAMA	07/27/2015
TOSHIYASU SAKAI	07/27/2015
HIROSHI HIGUCHI	07/27/2015
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	Canon Kabushiki Kaisha
<b>Street Address:</b>	30-2, Shimomaruko 3-Chome, Ohta-ku
<b>City:</b>	Tokyo
<b>State/Country:</b>	JAPAN
<b>Postal Code:</b>	146-8501
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	14728065
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(949)932-3577
<i>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.</i>	
<b>Phone:</b>	+81-3-5732-8698
<b>Email:</b>	prj-epas@list.canon.co.jp
<b>Correspondent Name:</b>	CANON KABUSHIKI KAISHA
<b>Address Line 1:</b>	30-2, SHIMOMARUKO 3-CHOME, OHTA-KU
<b>Address Line 4:</b>	TOKYO, JAPAN 146-8501
<b>ATTORNEY DOCKET NUMBER:</b>	10132903US01
<b>NAME OF SUBMITTER:</b>	KOZUE TANO
<b>SIGNATURE:</b>	/Kozue Tano/
<b>DATE SIGNED:</b>	08/24/2015
<b>Total Attachments: 2</b>	

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**ASSIGNMENT**

FOR VALUE RECEIVED, I/WE

Yoshinao OgataSeiko MinamiMasataka KatoMasaya UyamaToshiyasu SakaiHiroshi Higuchihereby sell, assign, transfer and convey unto **CANON KABUSHIKI KAISHA**a corporation of **Japan**having a place of business at **30-2, Shimomaruko 3-chome, Ohta-ku, Tokyo, Japan**

its successors, assigns and legal representatives (hereinafter called the "Assignee"), the entire right, title, and interest, for all countries, in and to certain inventions relating to

**METHOD OF FORMING THROUGH-SUBSTRATE**

and described in an application for Letters Patent of the United States executed by me/us, and  
 filed on **June 2, 2015** as United States Application No. **14/728065** or  
 as PCT International Application No.

and in and to said application, and all divisions, renewals and continuations thereof, and all Letters Patent of the United States which may be granted thereon, and all reissues and extensions thereof, and all applications for letters Patent or other grants of protection of proprietary rights including, but not limited to, inventor's certificate, utility model, utility certificate, patent of importation, registration of patent and industrial design registration which may be filed, and which may be granted, upon said inventions in any countries or regions foreign to the United States, and all reissues, renewals and extensions thereof; and I/we hereby authorize and request the Commissioner for Patents and Trademarks of the United States, and all officials of countries or regions foreign to the United States having authority to do so, to issue all such Letters Patent or other grants of protection upon said inventions to the Assignee or to such nominees as it may designate.

AND I/we authorize and empower the said Assignee or nominees to invoke and claim for any application for such Letters Patent or other grants of protection for said inventions filed by it or them, the benefit of the right of priority provided by the international Convention for the Protection of Industrial Property, as amended, or by a convention which may henceforth be substituted for it, and to invoke and claim such right of priority without further written or oral authorization from me/us.

AND I/we hereby consent that a copy of this assignment shall be deemed a full and formal equivalent of any assignment, consent to file or like document which may be required in any country or region for any purpose and

more particularly in proof of the right of the said Assignee or nominees to claim the aforesaid benefit of the right of priority provided by the International Convention for the Protection of Industrial Property, as amended, or by any convention which may henceforth be substituted for it.

AND I/we hereby covenant that I/we have the full right to convey the entire right, title and interest herein assigned and that I/we have not executed and will not execute any agreement in conflict herewith.

AND I/we hereby covenant and agree that I/we will communicate to said Assignee or nominees all facts known to me/us pertaining to said inventions, and testify in all legal proceedings, sign all lawful papers, execute all divisional, continuing and reissue applications, make all rightful oaths and declarations and in general perform all lawful acts necessary or proper to aid said Assignee or nominees in obtaining, maintaining, and enforcing all lawful patent or other grants of protection of said inventions in any and all countries and regions.

By: Yoshinao Ogata  
Yoshinao Ogata

Date: July<sup>Y.O</sup> 29, 2015

By: Seiko Minami  
Seiko Minami

Date: July 30, 2015

By: Masataka Kato  
Masataka Kato

Date: July 27, 2015

By: Masaya Uyama  
Masaya Uyama

Date: July 27, 2015

By: Toshiyasu Sakai  
Toshiyasu Sakai

Date: July 27, 2015

By: ~~Hiroshi~~<sup>H.H</sup> Hiroshi Higuchi  
Hiroshi Higuchi

Date: ~~Higuchi~~<sup>H.H</sup> July 27, 2015

By: \_\_\_\_\_

Date: \_\_\_\_\_

By: \_\_\_\_\_

Date: \_\_\_\_\_

By: \_\_\_\_\_

Date: \_\_\_\_\_

By: \_\_\_\_\_

Date: \_\_\_\_\_