505747697 10/30/2019

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT5794510

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
JINGBO WANG	04/12/2019
DOUKEI NAGAYASU	04/12/2019
YOSHIAKI TAKENAKA	04/12/2019
HITOSHI NISHIMURA	04/12/2019
MAKOTO RYUDO	04/12/2019
KIYOTAKA EIZUMI	04/12/2019
HIDEAKI YAMAGUCHI	04/12/2019
RYO ISHIKAWA	04/12/2019
MASATOSHI NISHIO	04/12/2019
TAKASI KAKUTANI	04/12/2019
YASUSHI MUKAI	04/12/2019
MITSURU MUKAI	04/12/2019
HIROYUKI HAYASHIKAWA	04/12/2019

RECEIVING PARTY DATA

Name:	PANASONIC INTELLECTUAL PROPERTY MANAGEMENT CO., LTD.	
Street Address:	ess: 1-61, SHIROMI 2-CHOME, CHUO-KU, OSAKA-SHI	
City:	OSAKA	
State/Country:	JAPAN	
Postal Code:	540-6207	

PROPERTY NUMBERS Total: 1

Property Type	Number	
Application Number:	16417760	

CORRESPONDENCE DATA

Fax Number:

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.

Email: epas.pkp@ml.jp.panasonic.com

Correspondent Name: PASONA KNOWLEDGE PARTNER INC.

Address Line 1: 8F OBP PANASONIC TOWER

Address Line 2: 1-61, SHIROMI 2-CHOME, CHUO-KU

REEL: 050857 FRAME: 0544

PATENT

505747697

Address Line 4: OSA	KA, JAPAN 540-6208
ATTORNEY DOCKET NUMBER:	P1012047US01
NAME OF SUBMITTER:	ASAMI KATO
SIGNATURE:	/Asami KATO/
DATE SIGNED:	10/30/2019

Total Attachments: 4

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	Assignment Form (Oct. 2014
Panasonic Ref*: P1012047US01	Application Serial No. 16/4/7760
Japan Firm Name: PIPM Direct	Japan Firm Ref:
US Firm Name*:	US Firm Ref:
* must be filled)	

ASSIGNMENT

WHEREAS, the undersigned has (have) invented the invention entitled:		
Box 1		
Title of Invention:		
LASER DEVICE		
1. For use when signing Declaration prior to filin	g U.S. patent application (check or	nly one box below)
(a) for which an application for U.S. patent has been executed	by the undersigned concur	rently herewith, or
(b) for which an application for U.S. patent has been executed	on the following date(s):	, or
(if Declaration & Assignment are signed on the same day, check (a) and make no entry in the blank; if	the Declaration was signed before this Assign	nment, enter the date(s) on which you signed the Declaration)
(c) for which an International Application has been filed as:	PCT Application No.	and
(for the PCT-US national entry, check only (c) and enter PCT application number in the right)	PCT Application No.	and
2. For use when signing Declara	tion after filing U.S. patent applicat	ion
(d) $_{\square}$ for which an application for U.S. patent has been filed on:	Application Filing Date	and,

WHEREAS, Panasonic Intellectual Property Management Co., Ltd. of 1-61, Shiromi 2-chome, Chuo-ku, Osaka-shi, Osaka 540-6207

Japan ita/thair

its/their heirs, successors, legal representatives and assigns (hereinafter designated as "Assignee(s)") is/are desirous of acquiring the entire right, title, and interest in and to said invention and in and to any Letters Patent(s) that may be granted therefor.

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged and intended to be legally bound hereby, the undersigned, by these presents, does sell, assign and transfer unto said Assignee(s) the entire and exclusive right, title and interest in and to; (i) said invention in the United States of America, its territories, dependencies and possessions (hereinafter designated as the United States) and in all countries foreign to the United States; and (ii) this patent application and any and all related patent application(s) disclosing said invention, including provisionals, non-provisionals, conversions, divisions, continuations-in-part and reissues thereof in the United States and all countries foreign to the United States (hereinafter designated as "Related Applications"), along with all rights of priority created by this patent application under any treaty relating thereto; and (iii) any and all Letters Patent(s), including all renewals, extensions, reissues and reexamination certificates which may be granted therefore, and all rights to sue for past and future infringement thereunder, in the United States and in all countries foreign to the United States for the full term or terms thereof.

The undersigned agree(s) to execute all papers necessary in connection with this application and any and all Related Applications thereof, all papers and documents and perform any act which may be necessary in connection with claims or provisions of the International Convention for Protection of Industrial Property or similar agreements, all papers necessary in connection with any interference which may be declared concerning this application or any and all Related Applications thereof and to cooperate with the Assignee(s) in every way possible in obtaining and producing evidence and proceeding with such interference, and for any and all litigations regarding, or for the purpose of protecting the right, title and interest in and to said invention, this application and any and all Related Applications or Letters Patent(s) therefore, and to testify in any legal proceeding relating thereto and in support thereof, for the benefit of Assignee(s), and also to execute separate assignments in connection with such applications as the Assignee(s) may deem necessary or expedient.

The undersigned agree(s) to perform all affirmative acts which may be necessary to obtain a grant of a valid United States and any foreign patent(s) to the Assignee(s) and to vest all rights hereby conveyed to the Assignee(s) as fully and entirely as the same would have been held by the undersigned if this Assignment had not been made.

The undersigned hereby authorize(s) and request(s) the Commissioner of Patents, and officials of all foreign countries, whose duty is to issue patents, to issue any and all Letters Patent(s) resulting from said application or any and all Related Applications thereof to said Assignee(s) and hereby covenants that the undersigned has (have) full right to convey the entire interest herein assigned, and that the undersigned has (have) not executed, and will not execute, any assignment, sale, agreement or encumbrances in conflict herewith.

The undersigned hereby does sell, assign and transfer unto said Assignee(s) the full and exclusive authority for revoking power of attorney(s) executed by the undersigned in connection with this application and for appointing a new power of attorney in place thereof.

The undersigned hereby grant(s) the Assignee(s) and the appointed U.S. patent attorneys and agents the power to insert on this assignment any further identification which may be necessary or desirable in order to comply with the rules of the U.S. Patent Office for recordation of this

document.

The undersigned hereby agree(s) that the above obligations shall apply to the undersigned both individually and collectively.

The undersigned hereby agree(s) that this Assignment shall be construed in accordance with the law of the appropriate jurisdiction within the

IN WITNESS WHEREOF, executed by the undersigned on the date(s) following the undersigned name(s) and signature(s).

Box2	(Each Inventor, please Sign and Date be	elow)	
	_(e) First Name, Last Name	(f) Signature	(g) Date signed
(1)	Jingbo WANG	Fingho Wang	Month, Date, Year April 12, 2019
(2)	Doukei NAGAYASU		Month, Date, Year
(3)	Yoshiaki TAKENAKA	Yoshiaki Takenaka	Month, Date, Year April 12.2019
(4)	Hitoshi NISHIMURA	Hilosty Nisumuros	Month, Date, Year April 12, 2019

■Check if additional paper(s) is/are attached. Total of 2 pages are submitted.

Panasonic Ref*: P1012047US01 Japan Firm Name: PIPM Direct US Firm Name*: (* must be filled) ASSIGNATION	Application Serial No Japan Firm Ref: US Firm Ref: GNMENT	Assignment Form (Oct. 2014) o. <u>16/4/7760</u>
WHEREAS, the undersigned has (have) invented the invention entitled	<u>:</u>	
Box 1 Title of Invention: LASER DEVICE	<u> </u>	
1. For use when signing Declaration prior to fili	ing U.S. patent application (check or	nly one box below)
(a)∎ for which an application for U.S. patent has been executed	d by the undersigned concur	rently herewith, or
(b)□ for which an application for U.S. patent has been executed	d on the following date(s):	, or
(if Declaration & Assignment are signed on the same day, check (a) and make no entry in the blank; is	f the Declaration was signed before this Assig	nment, enter the date(s) on which you signed the Declaration)
(c) for which an International Application has been filed as: (for the PCT-US national entry, check only (c) and enter PCT application number in the right)	PCT Application No.	and
2. For use when signing Declar	ration after filing U.S. patent applicat	tion
(d) for which an application for U.S. patent has been filed on: WHEREAS, Panasonic Intellectual Property Management		and,
Japan its/their heirs, successors, legal representatives and assigns (hereinafts title, and interest in and to said invention and in and to any Letters Pate NOW, THEREFORE, for good and valuable consideration, the re legally bound hereby, the undersigned, by these presents, does sell, as and interest in and to; (i) said invention in the United States of America United States) and in all countries foreign to the United States; and (ii) said invention, including provisionals, non-provisionals, conversions, di United States and all countries foreign to the United States (hereinafter by this patent application under any treaty relating thereto; and (iii) any reexamination certificates which may be granted therefore, and all right and in all countries foreign to the United States for the full term or term. The undersigned agree(s) to execute all papers necessary in concepts and documents and perform any act which may be necessary in Protection of Industrial Property or similar agreements, all papers nece this application or any and all Related Applications thereof and to coop evidence and proceeding with such interference, and for any and all Iti in and to said invention, this application and any and all Related Applic relating thereto and in support thereof, for the benefit of Assignee(s), a applications as the Assignee(s) may deem necessary or expedient. The undersigned agree(s) to perform all affirmative acts which m patent(s) to the Assignment had not been made. The undersigned hereby authorize(s) and request(s) the Commis patents, to issue any and all Letters Patent(s) resulting from said applic hereby covenants that the undersigned has (have) full right to convey t executed, and will not execute, any assignment, sale, agreement or en The undersigned hereby does sell, assign and transfer unto said executed by the undersigned in connection with this application and of The undersigned hereby grant(s) the Assignee(s) and the appointed U	ent(s) that may be granted there oceipt and sufficiency of which a sesign and transfer unto said Ass. Its territories, dependencies at this patent application and any lydsions, continuations, continuations and all Letters Patent(s), including to the solution of past and future infires thereof. Innection with this application and connection with claims or provises any in connection with any inferent with the Assignee(s) in everate with the Assignee(s) in everate with the Assignee(s) in the end also to execute separate assignations or Letters Patent(s) there are he Assignee(s) as fully and entities cation or any and all Related Applications or any and all Related Applications or conflict herewith Assignee(s) the full and exclusing appointing a new power of attriangles.	efor. are hereby acknowledged and intended to be signee(s) the entire and exclusive right, title nd possessions (hereinafter designated as the and all related patent application(s) disclosing atlons-in-part and reissues thereof in the atlons"), along with all rights of priority created ding all renewals, extensions, reissues and ringement thereunder, in the United States and any and all Related Applications thereof, all visions of the International Convention for terference which may be declared concerning very way possible in obtaining and producing prose of protecting the right, title and interest efore, and to testify in any legal proceeding signments in connection with such ant of a valid United States and any foreign irrely as the same would have been held by the of all foreign countries, whose duty is to issue oplications thereof to said Assignee(s) and led, and that the undersigned has (have) not he, sive authority for revoking power of attorney(s) orney in place thereof.

document.

The undersigned hereby agree(s) that the above obligations shall apply to the undersigned both individually and collectively.

The undersigned hereby agree(s) that this Assignment shall be construed in accordance with the law of the appropriate jurisdiction within the United States.

United States.

IN WITNESS WHEREOF, executed by the undersigned on the date(s) following the undersigned name(s) and signature(s).

Box2	(Each Inventor, please Sign and Date be	elow)	
	(e) First Name, Last Name	(f) Signature	(g) Date signed
(1)	Jingbo WANG		Month, Date, Year
(2)	Doukei NAGAYASU	Duhit Negayan	Month, Date, Year Apr: [12,2019
(3)	Yoshiaki TAKENAKA		Month, Date, Year
(4)	Hitoshi NISHIMURA		Month, Date, Year

Panasonic Ref*: P1012047US01

ASSIGNMENT (Cont.)

Additional Inventors:

	onal Inventors: Continued)	T	
	(e) First Name, Last Name	(f) Signature	(g) Date signed
(5)	Makoto RYUDO	Maketo Ryndo	Month, Date, Year April, 12 2019
(6)	Kiyotaka EIZUMI	Kiyotaka Eizumi	Month, Date, Year April. 12.2019
(7)	Hideaki YAMAGUCHI	Hideaki YAIYAGUCHI	Month, Date, Year April . 12. 2019
(8)	Ryo ISHIKAWA	Ry. ISHIKAWA	APril, 12, 2019
(9)	Masatoshi NISHIO	Masatosha MISHIO	Month, Date, Year April, [2, 2019
(10)	Takasi KAKUTANI	Tabash; Kakutani	Month, Date, Year
(11)	Yasushi MUKAI		Month, Date, Year
(12)	Mitsuru MUKAI	Mitsury Mukaj	April 12.2019
(13)	Hiroyuki HAYASHIKAWA	Hirenjuhi Suzashibawa	Month, Date, Year April. 12.2019
(14)			Month, Date, Year
(15)			Month, Date, Year
(16)			Month, Date, Year
(17)			Month, Date, Year
(18)	<u></u>		Month, Date, Year
(19)			Month, Date, Year
(20)			Month, Date, Year
(21)			Month, Date, Year
(22)			Month, Date, Year
		_	

 $_{\square}\text{Check}$ if additional paper(s) is/are attached. Total of $\underline{\hspace{0.4cm}2\hspace{0.4cm}}$ pages are submitted.

Panasonic Ref*: P1012047US01

16/417760

ASSIGNMENT (Cont.)

	onal Inventors:Continued)		
	(e) First Name, Last Name	(f) Signature	(g) Date signed
(5)	Makoto RYUDO		Month, Date, Year
(6)	Kiyotaka EIZUMI		Month, Date, Year
(7)	Hideaki YAMAGUCHI		Month, Date, Year
(8)	Ryo ISHIKAWA		Month, Date, Year
(9)	Masatoshi NISHIO		Month, Date, Year
(10)	Takasi KAKUTANI		Month, Date, Year
(11)	Yasushi MUKAI	Yasushi Mukai	Month, Daie, Year April 12, 2019
(12)	Mitsuru MUKAI		Month, Date, Year
(13)	Hiroyuki HAYASHIKAWA		Month, Date, Year
(14)			Month, Date, Year
(15)			Month, Date, Year
(16)			Month, Date, Year
(17)		-	Month, Date, Year
(18)			Month, Date, Year
(19)			Month, Date, Year
(20)			Month, Date, Year
(21)			Month, Date, Year
(22)			Month, Date, Year

□Check if additional paper(s) is/are attached. Total of 2 pages are submitted.