PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2

EPAS ID: PAT5879493

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
JAEBUM LIM	12/19/2019
SUNGHWAN KIM	12/19/2019
SEUNGHYUN KIM	12/19/2019
TAEHO KIM	12/19/2019
YUSHIN PARK	12/19/2019
SUNYOUNG YANG	12/19/2019

RECEIVING PARTY DATA

Name:	SAMSUNG SDI CO., LTD.	
Street Address:	150-20, GONGSE-RO, GIHEUNG-GU	
City:	YONGIN-SI, GYEONGGI-DO,	
State/Country:	KOREA, REPUBLIC OF	

PROPERTY NUMBERS Total: 1

Property Type	Number	
Application Number:	16722720	

CORRESPONDENCE DATA

Fax Number: (703)207-0003

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: 703-207-0008 Email: eoa@lee-iplaw.com **Correspondent Name:** LEE & MORSE, P.C.

3141 FAIRVIEW PARK DRIVE Address Line 1:

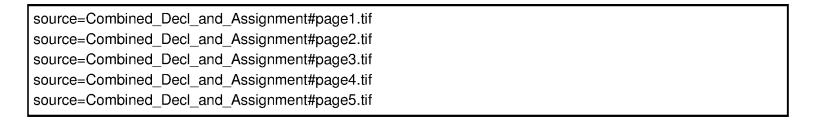
Address Line 2: SUITE 500

Address Line 4: FALLS CHURCH, VIRGINIA 22042

Total Attachments, 5	
DATE SIGNED:	12/20/2019
SIGNATURE:	/John M. Maksymonko/
NAME OF SUBMITTER:	JOHN M. MAKSYMONKO
ATTORNEY DOCKET NUMBER:	301/1666_00

Total Attachments: 5

PATENT REEL: 051345 FRAME: 0058



PATENT REEL: 051345 FRAME: 0059

COMBINED DECLARATION (37 CFR §1.63) FOR UTILITY PATENT APPLICATION AND ASSIGNMENT FORM¹

The undersigned acknowledges that this document is being used both as an assignment of the invention and as the declaration (37 CFR 1.63) for a Utility or Design Application.

WHEREAS, the undersigned, hereinafte	er referred to collectively as	s Assignor, has invented:
Title: HARDMASK COMPOSITION FORMING PATTERNS	ON, HARDMASK LAYEI	R AND METHOD OF
for which Assignor is about to make or patent.	has made United States or I	International application for
WHEREAS, as a below named inventor	r(s), I/(we) hereby declare t	hat:
Section I. Declaration		
This declaration is directed to the attach following is marked:	ed U.S. non-provisional pa	tent application, unless the
U.S. non-provisional pat	ent application number	
PCT international paten	t application number	, filed on
as amended by the Pr	eliminary Amendment atta	ched hereto.
as amended by the Pr	eliminary Amendment file	d on
The above-identified application was m	ade or authorized to be made	de by me (us).
I (we) believe that I am (we are) the originvention in the above-identified applications.		t inventors) of a claimed
I (we) hereby acknowledge that any will under 18 U.S.C. 1001 by fine or impriso		
I hereby state that I have reviewed and application, including the claims (as am		
I acknowledge that I am aware of the dupatentability as defined in 37 CFR § 1.5		which is material to
This form requires the use of an Application	Data Sheet.	
Client Ref No. 2018-0289	Attorney Ref No.	301/1666_00
COMBINED DECLARATION (37 C	FR 1.63) FOR UTILITY PAT	ENT APPLICATION AND

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본 정보는 삼성SDI 정보자산 관리책임자의 허가없이 출력,배포,반출을 할 수 없으며, 위규시 관련법령에 의거하여 인사상 불이익을 받을 수 있습니다. PATENT

REEL: 051345 FRAME: 0060

<u>Power of Attorney:</u> I/we hereby appoint as my attorneys, with full powers of substitution and revocation, to prosecute this application and transact all business in the Patent and Trademark Office practitioners associated with Customer Number 27849.

Section II. Assignment

In consideration of the sum of One Dollar (\$1.00) and other good and valuable consideration paid to each of the undersigned, the undersigned hereby sell(s) and assign(s) to

Samsung SDI Co., Ltd.

having an address at 150-20, Gongse-ro, Giheung-gu, Yongin-si, Gyeonggi-do 17084, Republic of Korea (hereinafter designated as the Assignee), the entire (100%) right, title and interest for the United States as defined in 35 USC §100, in the invention described in the application identified in Section I of this document.

Assignor hereby confirms any prior assignment to Assignee, and to the extent that Assignor has not already done so, agrees to assign, and hereby does, sell, assign and transfer unto Assignee and its successors in interest, the full and exclusive right, title and interest in the United States of America and throughout the world, including the right to claim priority under the laws of the United States, the Paris Convention, and any foreign countries, to the inventions as described in the aforesaid application, to the aforesaid application itself, and all divisions, continuations, continuations-in-part, or other applications claiming priority directly or indirectly from the aforesaid application, and any United States or foreign Letters Patent, utility model, or other similar rights which may be granted thereon, including reissues, reexaminations and extensions thereof, and all copyright rights throughout the world in the aforesaid application and the subject matter disclosed therein, these rights, title and interest to be held and enjoyed by Assignee to the full end of the term for which the Letters Patent, utility model, or other similar rights, are granted and any extensions thereof as fully and entirely as the same would have been held by Assignor had this assignment and sale not been made, and the right to sue for, and recover for past infringements of, or liabilities for, any of the rights relating to any of the applications, patents, utility models, or other similar rights, resulting therefrom, and the copyright rights;

Assignor hereby covenants and agrees to execute all instruments or documents required or requested for the making and prosecution of any applications of any type for patent, utility model, or other similar rights, and for copyright, in the United States and in all foreign countries including, but not limited to, any provisional, continuation, continuation-in-part, divisional, renewal or substitute thereof, and as to letters patent any reissue, re-examination, or extension thereof, and for litigation regarding, or for the purpose of protecting title and to the said invention, the United States application for patent, or Letters Patent therefor, and to testify in support thereof, for the benefit of Assignee without further or other compensation than that above set forth;

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Assignor hereby covenants that no assignment, sale, license, agreement or encumbrance has been or will be entered into which would conflict with this Assignment; and

Assignor hereby requests the United States Patent and Trademark Office to issue the Letters Patent of the United States of America to Assignee, and requests that any official of any country or countries foreign to the United States, whose duty it is to issue or grant patents and applications as aforesaid, to issue the Letters Patent, Utility Model Registration or other similar right to Assignee.

The undersigned hereby grant(s) the law firm of LEE & MORSE, P.C. the power to insert on this Declaration and Assignment any further identification which may be necessary or desirable in order to comply with the rules of the U.S. Patent and Trademark Office for recordation of this document.

Section III. Inventor(s)/Assignor(s) Signature(s)

LEGAL NAME OF FIRST	Family Name	First Given Name	Second Given Name
INVENTOR/ASSIGNOR	LIM	Jaebum	
and the second s			
		MSGREESS	
	ΩI		13-6-0
AND AND ADDRESS OF A PARKET VIEW TOTAL	MANUEL	DATE (3 12/19
SIGNATURE			

LEGAL NAME OF SECOND	Family Name	First Given Name	Second Given Name
INVENTOR/ASSIGNOR	KIM	Sunghwan	:
		4	
SIGNATURE	7645	DATE	3 12/19

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LEGAL NAME OF THIRD	Family Name	First Given Name	Second Given Name
INVENTOR/ASSIGNOR	KIM	Seunghyun	
SIGNATURE	U & by	DATE	12/19

LEGAL NAME OF FOURTH	Family Name	First Given Name	Second Given Name
INVENTOR/ASSIGNOR	KIM	Taeho	
			. 3
		: ************************************	
SIGNATURE	nlme	DATE	12,19.
	Service Service 1		

LEGAL NAME OF FIFTH	Family Name	First Given Name	Second Given Name
INVENTOR/ASSIGNOR	PARK	Yushin	· .
		I.	
	-		
SIGNATURE	时别处	DATE	12,19
		"	

Client Ref No.	2018-0289	Attorney Ref No.	301/1666_00
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RECORDED: 12/20/2019

LEGAL NAME OF SIXTH	Family Name	First Given Name	Second Given Name
INVENTOR/ASSIGNOR	YANG	Sunyoung	
			() () ()
SIGNATURE	Or in on	DATE	12/19.

301/1666_00

Attorney Ref No.

2018-0289

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