

PATENT ASSIGNMENT COVER SHEET

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Stylesheet Version v1.2

EPAS ID: PAT6492033

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT
CONVEYING PARTY DATA	
Name	Execution Date
YOUNGKI JUNG	11/13/2020
JINHO KIM	11/13/2020
DONGMYUNG SON	11/16/2020
SANGMIN SHIN	04/26/2018
CHANGJOON LEE	11/13/2020
KYUNGWOON JANG	11/13/2020
SEONGPHIL CHO	11/13/2020
GYUN HEO	11/16/2020
SOONMIN HONG	11/13/2020
RECEIVING PARTY DATA	
Name:	SAMSUNG ELECTRONICS CO., LTD.
Street Address:	129, SAMSUNG-RO, YEONGTONG-GU, GYEONGGI-DO
City:	SUWON-SI
State/Country:	KOREA, REPUBLIC OF
Postal Code:	16677
PROPERTY NUMBERS Total: 1	
Property Type	Number
Application Number:	17259681
CORRESPONDENCE DATA	
Fax Number:	(202)293-7860
<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>	
Phone:	202-293-7060
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Address Line 1:	2000 PENNSYLVANIA AVENUE, N.W.
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Address Line 4:	WASHINGTON, D.C. 20006
ATTORNEY DOCKET NUMBER:	Q259469
NAME OF SUBMITTER:	TODD YARBOROUGH - TEAMS

PATENT

SIGNATURE:	/Todd Yarborough/
DATE SIGNED:	01/12/2021
	This document serves as an Oath/Declaration (37 CFR 1.63).
Total Attachments: 8 source=Q259469ExecutedDeclarationandAssignmenttobefiled#page1.tif source=Q259469ExecutedDeclarationandAssignmenttobefiled#page2.tif source=Q259469ExecutedDeclarationandAssignmenttobefiled#page3.tif source=Q259469EmployeeinventionreportSSHINforAssignmentrecording#page1.tif source=Q259469EmployeeinventionreportSSHINforAssignmentrecording#page2.tif source=Q259469EmployeeinventionreportSSHINforAssignmentrecording#page3.tif source=Q259469EmployeeinventionreportSSHINforAssignmentrecording#page4.tif source=Q259469EmployeeinventionreportSSHINforAssignmentrecording#page5.tif	

ASSIGNMENT WITH DECLARATION FOR UTILITY OR DESIGN PATENT APPLICATION (37 CFR 1.63)

Whereas, We, the undersigned inventors hereinafter called assignors, have invented certain improvements described in the application identified below; and

Whereas, SAMSUNG ELECTRONICS CO., LTD, of 129, Samsung-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16677, Republic of Korea, (assignee), desires to acquire the entire right, title, and interest in the application and invention, and to any United States patents to be obtained therefor;

Now therefore, for valuable consideration, receipt whereof is hereby acknowledged,

We, the above named assignors, hereby sell, assign and transfer to the above named assignee, its successors and assigns, the entire right, title and interest in the application and the invention disclosed therein for the United States of America and all other countries, including all divisions, and continuations thereof, and all Letters Patent of the United States that may be granted thereon, and all reissues thereof, and including rights of priority under the International Convention of Paris (1883) as amended, the laws of all foreign countries, and the laws of the United States including the right to claim priority under 35 USC 119 and the right to sue for past damages, and we request the Director of the U.S. Patent and Trademark Office to issue any Letters Patent granted upon the invention set forth in the application to the assignee, its successors and assigns; and we hereby agree that the assignee may apply for foreign Letters Patent on the invention and we will execute without further consideration all papers deemed necessary by the assignee in connection with the United States and foreign applications when called upon to do so by the assignee.

(Legalization not required for recording but is prima facie evidence of execution under 35 USC 261)

As the below named inventor, I hereby declare that:

- This assignment with declaration is directed to:
- The attached application, or
 - United States Application or PCT International Application Number PCT/KR2019/008540 filed on July 11, 2019.

The application is entitled:

DISPLAY PANEL

The above identified application was made or was authorized to be made by me.

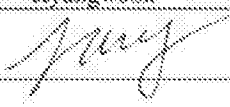
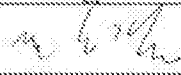

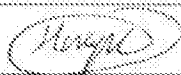
I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.

I have reviewed and understand the contents of the application for which this assignment with declaration is being submitted.

I am aware of the duty to disclose to the Office all information known to me to be material to patentability as defined in 37 CFR 1.56.

I hereby acknowledge that any willful false statement made in this assignment with declaration is punishable under 18 USC 1001 by fine or imprisonment of not more than five (5) years, or both.

NAME OF SOLE OR FIRST INVENTOR:	
Given Name (first and middle [if any])	Youngki
Family Name or Surname	JUNG
Inventor's signature	Youngki Jung
Date	2020. Nov. 13
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Mailing Address: 129, Samsung-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16677, Republic of Korea	
NAME OF SECOND INVENTOR:	
Given Name (first and middle [if any])	Jinho
Family Name or Surname	KIM
Inventor's signature	Jinho Kim
Date	2020. Nov. 13
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Mailing Address: 129, Samsung-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16677, Republic of Korea	
NAME OF THIRD INVENTOR:	
Given Name (first and middle [if any])	Dongmyung
Family Name or Surname	SON
Inventor's signature	Dongmyung Son
Date	2020. Nov. 16
Residence: Suwon-si, Republic of Korea	
Mailing Address: 129, Samsung-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16677, Republic of Korea	
NAME OF FOURTH INVENTOR:	
Given Name (first and middle [if any])	Sangmin
Family Name or Surname	SHIN
Inventor's signature	
Date	
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NAME OF FIFTH INVENTOR:	
Given Name (first and middle [if any])	Changjoon
Family Name or Surname	LEE
Inventor's signature	Changjoon Lee
Date	2020. Nov. 13
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NAME OF SIXTH INVENTOR:	
Given Name (first and middle [if any])	Kyungwoon
Family Name or Surname	JANG
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NAME OF SEVENTH INVENTOR:	
Given Name (first and middle [if any])	Seongphil
Family Name or Surname	CHO
Inventor's signature	
Date	2020. Nov. 13
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Mailing Address:	129, Samsung-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16677, Republic of Korea
NAME OF EIGHTH INVENTOR:	
Given Name (first and middle [if any])	Gyun
Family Name or Surname	HEO
Inventor's signature	
Date	2020. Nov. 16
Residence:	Suwon-si, Republic of Korea
Mailing Address:	129, Samsung-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16677, Republic of Korea
NAME OF NINTH INVENTOR:	
Given Name (first and middle [if any])	Soonjae
Family Name or Surname	HONG
Inventor's signature	
Date	2020. Nov. 13
Residence:	Suwon-si, Republic of Korea
Mailing Address:	129, Samsung-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16677, Republic of Korea

Employee's invention report

* I (We) assign a right to receive a patent right for the below invention to the company under Article 4 of the employee's invention compensation standards of the company.

Title of Invention(KR)	Modular type display 를 위한 chamfer 및 측면배선 형성 방법	Reporting ID	J2018-04-0864
Title of Invention(US)	Method to make Side Wiring on chamfered edge for Modular Type Display		

Basic Information

Invention related to the duties report department	SET	Inventor	YOUNGKI JUNG	Department Name	Product Development Lab (VD)				
project connection or not	connection								
Project title	Development of high-resolution modular type backplane driving technology								
Inventor(s)	In-house or not	Name (Korean)	Working condition	Name (English)	Company	Department	Representative	Contribution to invention (%)	Details of contribution
	In-house	정영기	In office	YOUNGKI JUNG	Samsung Electronics Co., Ltd.	Advanced display lab (VD)	Yes	20	Initial proposal and specification
	In-house	김진호	In office	JINHO KIM	Samsung Electronics Co., Ltd.	Advanced Display Lab (VD)		10	Supplementation, improvement, and specification of the invention
	In-house	송용영	In office	DONGMI YUNSON	Samsung Electronics Co., Ltd.	Advanced Display Lab (VD)		10	Supplementation, improvement, and specification of the invention
	In-house	신성민	Retired	SANGMIN SHIN	Samsung Electronics Co., Ltd.	Advanced Display Development Lab (VD)		10	Supplementation, improvement, and specification of the invention
	In-house	이정훈	In office	CHANGJUN LEE	Samsung Electronics Co., Ltd.	Advanced Display Lab (VD)		10	Supplementation, improvement, and specification of the invention
	In-house	정경만	In office	KYUNGWON JANG	Samsung Electronics Co., Ltd.	Advanced Display Lab (VD)		10	Supplementation, improvement, and specification of the invention
	In-house	조영필	In office	SEONGPHIL CHO	Samsung Electronics Co., Ltd.	Advanced Display Lab (VD)		10	Supplementation, improvement, and specification of the invention
	In-house	허균	In office	GYUNHEO	Samsung Electronics Co., Ltd.	Advanced Display Lab (VD)		10	Supplementation, improvement, and specification of the invention
	In-house	홍순민	In office	SOONMIN HONG	Samsung Electronics Co., Ltd.	Advanced Display Lab (VD)		10	Supplementation, improvement, and specification of the invention
Product Type (New)	Code		Type system			Classification	*Representative classification		
	PAS020199		Audio/Visual Device > TV > Others			uLED TV	●		
Technology Type (New)	Code		Type system			Classification	*Representative classification		

	TA02011399	Audio/Visual Device > TV > Display driving control > Others	uLED TV operation	•
Classification on technology	Code	Classification system		
Classification on Project	Code	Classification system		

Applicant(s) information

Co-Applicant	Self-invention	right ownership type		-		
Applicant	Domestic/Oversea	Classification	Corporation Name	Applicant or not	Cost Sharing (%)	Right share (%)
	Domestic	Corporation	Samsung Electronics Co. Ltd.	Y	100	
Contract						
Contribution to Invention						
Document proving contribution to invention (minutes, e-mail, drawings, etc.)						
Cost sharing information						

Prior Art Search

Prior Art	Registration ID	Application title (Title of Invention)	Nation	Application No.	Applicant	Application Date	Publication No.	Date of Publication	Registration No.	Registration Date	Regis
			DISPLAY DEVICE	US	US15/667741	Japan Display Inc.	20170803	US20180069072A1	20180308		
		METHOD FOR MANUFACTURING FILM AND METHOD OF MANUFACTURING DISPLAY	US	US13/487731	Sony Corporation	20120604	US20120322334A1	20121220			
Search Dissertation	Title of Dissertation			Writer	Journal Name	Pages	Publication Date				
Comment of Prior Art											
Other Prior Art Reference											

Invention

Invention Abstract	
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Invention keyword	Modular Type Display, Side Wiring, Chamfered edge, Lift Off, Substrate etching, 3D sputter		
Invention excavation activity (Weather pertaining to Collective Intelligence)	No	Name of invention excavation activity	
Employee's invention report			

Reference

Urgent Application	URGENT	Reason for Urgent Application	Competition with competitor for filing an invention	
Detailed Reason(s) for Urgent Application	This is a patent on forming side wiring which is the key technology in uLED display (modular type) development.			
Attach data for Urgent Application				
Publication	No	Publication Country/Organization		
Publication Date	Published Method			
Subject to a standard	No	Date to be a Standardization candidate	Weather there is a contribution	The initial (or an expected) date of contribution
Standardization Organization	Name of Standardization Organization	Name of Standard Subject		
Application product	uLED Panel			
Notice to the IP department Application				

Review of a co-worker

Date		Reviewer	
Review			

History of approval

Title	Method to make Side Wiring on chamfered edge for Modular Type Display
Status	Finally approved

Order	Type	Name	Position	Processed time and date	Department	Opinion on the report
0	Filed the draft	YOUNGKI JUNG	Senior Engineer	2018-04-25 17:38:02	Product development Lab (VD)	The invention relates to uLED side wiring and chamfered edge.
1	Agreed	DONGMYUNG SON	Engineer	2018-04-25 17:41:50	Product development Lab (VD)	
1	Agreed	SANGMIN SHIN	Principal engineer	2018-04-26 13:53:52	Product development Lab (VD)	After completing the substrate process, ITO for side wiring is used as an etch mark to form chamfer.
1	Agreed	CHANGJOON LEE	Senior Engineer	2018-05-02 18:21:43	Process development Lab (VD)	

Management on employee's invention proceeding date

Inventor's reporting date	2018.04.25	Approval date of department head	2018.05.08	Filing date in patent department	2018.05.08
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List

특수발명신고

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* 당시 특수발명 심사규칙 제 4조에 따라 특허의 청구 범위에 대하여 특허를 받을 수 있는 권리를 표시해 인도됩니다.

발명명칭(한글)	Monitor Type Display를 위한, Character 및 측면배선 형성방법	신규성	2017-14-0884
발명명칭(영문)	Method to make Side Wiring on charactered edge for Monitor Type Display		

기종명

특수발명신고부서	SET	작성자	첨명기	부서명	제품개발Lab(VO)
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외국인지적자	없음
--------	----

과제명: 모바일로 사용할 방식 Backplane 구동 기술 개발

사내/외	성명(국문)	직책(성명)	성명(영문)	소속기관	소속부서	대중	발명기여도(%)	기타비고
사내	김영진	책임	YEONJIN KIM	삼성전자	신형(Display Lab/VO)	Yes	20	발명의 기획/개발 및 구현
사내	김진우	책임	JINHO KIM	삼성전자	신형(Display Lab/VO)		15	발명의 기획/개발 및 구현
사내	송철우	책임	[SONGMYUNG] SON	삼성전자	신형(Display Lab/VO)		10	발명의 기획/개발 및 구현
사내	신상민	책임	SANGMIN SHIN	삼성전자	신형(Display Lab/VO)		10	발명의 기획/개발 및 구현
사내	이창준	책임	CHANGJUN LEE	삼성전자	신형(Display Lab/VO)		10	발명의 기획/개발 및 구현
사내	김진우	책임	KYUNG WOOIN KIM	삼성전자	신형(Display Lab/VO)		10	발명의 기획/개발 및 구현
사내	김철우	책임	SEONG-PAH, CH	삼성전자	신형(Display Lab/VO)		10	발명의 기획/개발 및 구현
사내	이규	책임	GYUN HEO	삼성전자	신형(Display Lab/VO)		10	발명의 기획/개발 및 구현
사내	홍준민	책임	SOONMIN HONG	삼성전자	신형(Display Lab/VO)		10	발명의 기획/개발 및 구현

기술분류(중)	코드	분류체계	분류상징	대표분류
PA201103	Audio/Visual Device > TV > Other		OLED TV	⊙
기술분류(소)	코드	분류체계	분류상징	대표분류
PA201103	Audio/Visual Device > TV > Display 구동 제어 > Other		OLED TV구동	⊙
기술분류(중)	코드		분류체계	
기술분류(소)	코드		분류체계	

출발점 정보

출발점명	직책/성명		성명/성명		출발점명	기술분류(중)	기술분류(소)
	국내/해외	구분	국내	성명/성명			
기술분류(중)	국내	책임	성명/성명	성명/성명	출발점명	기술분류(중)	기술분류(소)
기술분류(소)	국내	책임	성명/성명	성명/성명	출발점명	기술분류(중)	기술분류(소)

신용거증조사

항수 ID	출발점명(발명명칭)	국가	출발번호	출발일	출발일	출발번호	출발일	출발번호	출발일
신용거증	DISPLAY DEVICE	US	US15/987741	Japan Display Inc.	2017/08/08	US2017/00089072 A1	2018/08/08		
신용거증	METHOD OF MANUFACTURING FILM WITH SIDE WIRING FOR MANUFACTURING DISPLAY	US	US15/497773	Sony Corporation	2017/08/04	US2017/00020304 A1	2017/12/20		
조사기관	한국세관	제자명	제자명	제자명	제자명	제자명	제자명	제자명	제자명
신용거증									
신용거증									
신용거증									

발명내용

발명내용	Monitor Type Display, Side Wiring, Charactered edge, LED chip, Substrate wiring, 3D spacer
발명내용	Not

