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(72) Inventors:
• **KIM, Kyung-Min**
Paju-si, Gyeonggi-do (KR)
• **HAN, In-Hyo**
Paju-si, Gyeonggi-do (KR)

(74) Representative: **Viering, Jentschura & Partner mbB**
Patent- und Rechtsanwälte
Am Brauhaus 8
01099 Dresden (DE)

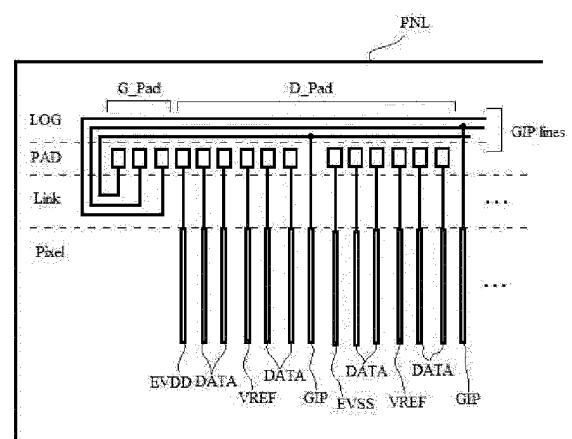
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(71) Applicant: **LG Display Co., Ltd.**
Seoul 150-721 (KR)

(54) **OLED DISPLAY PANEL AND OLED DISPLAY DEVICE**

(57) The present invention relates to an OLED display panel (PNL) and an OLED display device in which a gate-in-panel (GIP) driving circuit is arranged in an active area (AA) in order to minimize a bezel size and a GIP signal is applied to the GIP driving circuit arranged in the active area (AA) using a single-sided COF, and the OLED display panel includes: an active area (AA) including data lines, scan lines intersecting the data lines, and sub-pixels arranged at each intersection; stages of a GIP driving circuit distributed and arranged in a plurality of unit pixel regions corresponding to the scan lines in the active area (AA) to supply scan pulses to the scan lines; and a non-active area (NA) including a pad part (PAD), a link part (Link) and a line-on-glass (LOG) part (LOG), wherein the pad part (PAD) includes a gate pad part (G_Pad) for supplying various control signals to the stages of the GIP driving circuit, and a data pad part (D_Pad) for supplying a data voltage to each data line, and wherein the non-active area (NA) includes a plurality of signal lines extended from the gate pad part (G_Pad) via the link part (Link) to the LOG part in order to supply various control signals to the GIP parts (31) is arranged.

FIG. 9



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Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	EP 3 187 928 A2 (LG DISPLAY CO LTD [KR]) 5 July 2017 (2017-07-05)	1,2,5,6, 8,9	INV. G09G3/3266
Y	* paragraphs [0005] - [0018], [0034] - [0038], [0111]; figures 1-6 *	3,4	H01L27/32
X	US 2017/255074 A1 (NISHIYAMA TAKAYUKI [JP] ET AL) 7 September 2017 (2017-09-07)	1,2,5,6, 8,9	
Y	* paragraphs [0001], [0071], [0089]; figures 2,3,4,5,6,7A,8A *	3,4	
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The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 26 April 2019	Examiner Pichon, Jean-Michel
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

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Y	----- US 2015/129853 A1 (SHIN MIN-JAE [KR] ET AL) 14 May 2015 (2015-05-14) * paragraphs [0069] - [0076]; figures 2,5,6A,6B *	7,10	
			TECHNICAL FIELDS SEARCHED (IPC)
The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 26 April 2019	Examiner Pichon, Jean-Michel
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

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Application Number

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CLAIMS INCURRING FEES

The present European patent application comprised at the time of filing claims for which payment was due.

☐ Only part of the claims have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due and for those claims for which claims fees have been paid, namely claim(s):

☐ No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due.

LACK OF UNITY OF INVENTION

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

see sheet B

☒ All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.

☐ As all searchable claims could be searched without effort justifying an additional fee, the Search Division did not invite payment of any additional fee.

☐ Only part of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid, namely claims:

☐ None of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims, namely claims:

☐ The present supplementary European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims (Rule 164 (1) EPC).

**LACK OF UNITY OF INVENTION
SHEET B**

Application Number

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The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

1. claims: 1, 2, 5, 6, 8, 9

a detour of the signal lines

2. claims: 3, 4

a bootstrapping capacitor

3. claims: 7, 10

a reference voltage supply line and first and second
constant voltage supply lines

**ANNEX TO THE EUROPEAN SEARCH REPORT
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This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
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专利名称(译)	OLED显示面板和OLED显示装置		
公开(公告)号	EP3477626A3	公开(公告)日	2019-06-12
申请号	EP2018181141	申请日	2018-07-02
[标]申请(专利权)人(译)	乐金显示有限公司		
申请(专利权)人(译)	LG DISPLAY CO. , LTD.		
当前申请(专利权)人(译)	LG DISPLAY CO. , LTD.		
[标]发明人	KIM KYUNG MIN HAN IN HYO		
发明人	KIM, KYUNG-MIN HAN, IN-HYO		
IPC分类号	G09G3/3266 H01L27/32		
CPC分类号	G09G3/3266 G09G2300/0408 G09G2300/0426 G09G2310/0281 G09G2310/0291 H01L27/3276 G09G2300/0439 G09G2310/08		
审查员(译)	PICHON , JEAN-MICHEL		
优先权	1020170140208 2017-10-26 KR		
其他公开文献	EP3477626A2		
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摘要(译)

OLED显示面板 (PNL) 和OLED显示装置技术领域本发明涉及OLED显示面板 (PNL) 和OLED显示装置, 其中面板内栅极 (GIP) 驱动电路布置在有源区域 (AA) 中以最小化边框尺寸和GIP信号。应用于使用单面COF布置在有源区域 (AA) 中的GIP驱动电路, 并且OLED显示面板包括: 包括数据线的有源区域 (AA), 与数据线交叉的扫描线, 以及子像素安排在每个十字路口; GIP驱动电路的各级分布并排列在与有源区 (AA) 中的扫描线对应的多个单位像素区中, 以向扫描线提供扫描脉冲; 非有源区域 (NA) 包括焊盘部分 (PAD), 链接部分 (Link) 和玻璃上线 (LOG) 部分 (LOG), 其中焊盘部分 (PAD) 包括栅极焊盘部分 (G_Pad) 用于向GIP驱动电路的各级提供各种控制信号, 以及数据焊盘部分 (D_Pad), 用于向每条数据线提供数据电压, 并且其中非有效区域 (NA) 包括多个信号为了向GIP部件 (31) 提供各种控制信号, 设置从栅极焊盘部分 (G_Pad) 经由链接部分 (Link) 延伸到LOG部分的线。

FIG. 9

