



(12) **EUROPEAN PATENT APPLICATION**

(88) Date of publication A3:
16.11.2016 Bulletin 2016/46

(43) Date of publication A2:
26.03.2014 Bulletin 2014/13

(21) Application number: **13183456.6**

(22) Date of filing: **09.09.2013**

(51) Int Cl.:
H01L 51/52 ^(2006.01) **G02F 1/1335** ^(2006.01)
H04N 5/64 ^(2006.01) **H01L 27/30** ^(2006.01)
B65D 85/38 ^(2006.01) **G06F 1/16** ^(2006.01)
H04N 5/645 ^(2006.01) **H05K 5/02** ^(2006.01)
H01L 51/00 ^(2006.01)

(84) Designated Contracting States:
**AL AT BE BG CH CY CZ DE DK EE ES FI FR GB
GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO
PL PT RO RS SE SI SK SM TR**
Designated Extension States:
BA ME

(30) Priority: **19.09.2012 KR 20120103952**

(71) Applicant: **Samsung Display Co., Ltd.**
Gyeonggi-do (KR)

(72) Inventor: **Kim, Hwan-Jin**
Yongin-City (KR)

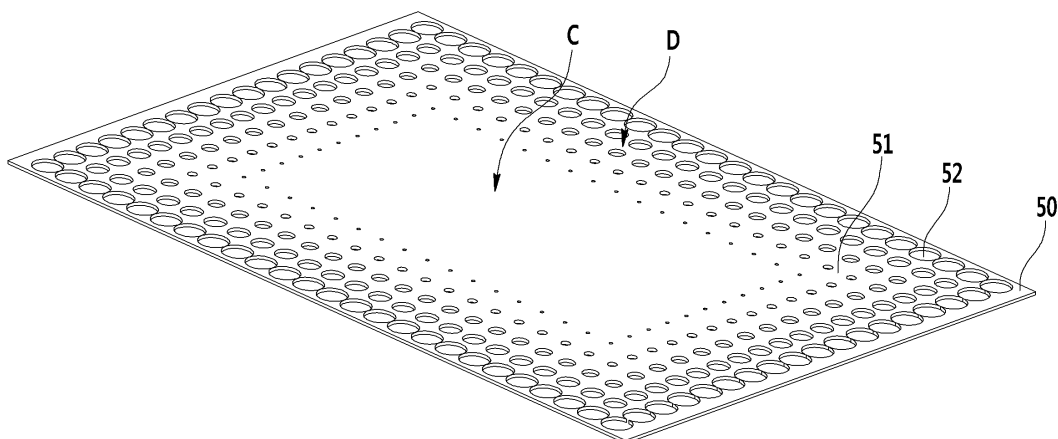
(74) Representative: **Gulde & Partner**
Patent- und Rechtsanwaltskanzlei mbB
Wallstraße 58/59
10179 Berlin (DE)

(54) **Organic light emitting diode display**

(57) An organic light emitting diode (OLED) display according to an exemplary embodiment includes: a display substrate (100); an organic light emitting element (200) on the substrate (100); a sealing member (300) covering the organic light emitting element (200); a sealant (310) formed between a surrounding portion of the display substrate (100) and a surrounding portion of the sealing member (300); and an impact absorption layer (50) under the display substrate (100), wherein an area ratio of the impact absorption agent (51) in the impact

absorption layer (50) increases from the surrounding portion of the display substrate (100) to a center of the display substrate (100) such that the impact absorption ratio of the outer portion of the surrounding impact absorption layer (D) is higher than the impact absorption ratio of the center impact absorption layer (C), and accordingly, damage to the surrounding portion of the display substrate (100) that is weak against external impact may be prevented.

FIG. 3





EUROPEAN SEARCH REPORT

Application Number
EP 13 18 3456

5

10

15

20

25

30

35

40

45

50

55

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	US 2009/257010 A1 (SAKURAI SHINJI [JP]) 15 October 2009 (2009-10-15) * paragraph [0060]; figure 2 *	1	INV. H01L51/52 G02F1/1335 H04N5/64
A	EP 2 086 008 A1 (SAMSUNG MOBILE DISPLAY CO LTD [KR]) 5 August 2009 (2009-08-05) * paragraph [0037]; figures 1,3 *	1-17	H01L27/30 B65D85/38 G06F1/16 H04N5/645
A	WO 2011/125307 A1 (SHARP KK [JP]; FUJIWARA MASAKI; FUKUSHIMA YASUMORI) 13 October 2011 (2011-10-13) * paragraphs [0054] - [0059], [0098], [0124], [0127], [0130]; figures 3,4,17,22-24 *	1-17	H05K5/02 H01L51/00
A,P	EP 2 599 618 A1 (SAMSUNG DISPLAY CO LTD [KR]) 5 June 2013 (2013-06-05) * paragraph [0032] - paragraph [0034]; figures 3,5 *	1-17	TECHNICAL FIELDS SEARCHED (IPC) H01L G02F H04N B65D G06F H05K
The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 5 October 2016	Examiner Pusch, Catharina
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			

EPO FORM 1503 03.02 (P04C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 13 18 3456

5 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
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

05-10-2016

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2009257010 A1	15-10-2009	JP 2009251550 A	29-10-2009
		US 2009257010 A1	15-10-2009
EP 2086008 A1	05-08-2009	EP 2086008 A1	05-08-2009
		KR 20090085311 A	07-08-2009
		US 2009195973 A1	06-08-2009
WO 2011125307 A1	13-10-2011	US 2012262660 A1	18-10-2012
		WO 2011125307 A1	13-10-2011
EP 2599618 A1	05-06-2013	CN 103137022 A	05-06-2013
		EP 2599618 A1	05-06-2013
		KR 20130060885 A	10-06-2013
		TW 201321192 A	01-06-2013
		US 2013135877 A1	30-05-2013
		US 2016176151 A1	23-06-2016

专利名称(译)	有机发光二极管显示器		
公开(公告)号	EP2712002A3	公开(公告)日	2016-11-16
申请号	EP2013183456	申请日	2013-09-09
[标]申请(专利权)人(译)	三星显示有限公司		
申请(专利权)人(译)	三星DISPLAY CO. , LTD.		
当前申请(专利权)人(译)	三星DISPLAY CO. , LTD.		
[标]发明人	KIM HWAN JIN		
发明人	KIM, HWAN-JIN		
IPC分类号	H01L51/52 G02F1/1335 H04N5/64 H01L27/30 B65D85/38 G06F1/16 H04N5/645 H05K5/02 H01L51/00		
CPC分类号	H01L27/32 G02F1/133608 H01L27/307 H01L27/3244 H01L51/0096 H01L51/5237 H01L51/524 Y02E10/549		
审查员(译)	PUSCH, 凯萨琳娜		
优先权	1020120103952 2012-09-19 KR		
其他公开文献	EP2712002A2		
外部链接	Espacenet		

摘要(译)

根据示例性实施例的有机发光二极管 (OLED) 显示器包括：显示基板 (100) ;有机发光元件 (200) , 位于所述基板 (100) 上;覆盖所述有机发光元件 (200) 的密封构件 (300) 。形成在所述显示基板的周围部分和所述密封构件的周围部分之间的密封剂;和在所述显示基板 (100) 下面的冲击吸收层 (50) , 其中所述冲击吸收层 (50) 中的所述冲击吸收剂 (51) 的面积比率从所述显示基板 (100) 的周围部分增加到以使得周围冲击吸收层 (D) 的外侧部分的冲击吸收率高于中心冲击吸收层 (C) 的冲击吸收率, 并且因此, 显示基板 (100) 的对可以防止显示基板 (100) 的对外部冲击弱的周围部分。

FIG. 3

