



2

3a

3e

\* \*

200 : 300 :

400 : 220, 320 :

500 : 510 :

520 : 420, 430 :

230 : 231, 235 : /

240 : 241 - 246, 251 - 255 :

250 : 255 :

251, 252 : 260 :

1

1

(100) (110) (110) 1 (120)  
(115) (120) (115) 2 (130)  
(130) (130)  
(130) (120) p (115)  
(140) / (121), (125) (130) (140)  
(141), (145)  
(141), (145) 4 (121), (125) (151), (155) (Vdd)  
(160) 5 (155) (160)  
(160) ITO (165) 6 (155) (170)

(180) 7 (180)  
(170) (185) . , (185)  
(170) EL (190) (195)  
가 .

CMOS

Mo, MoW, AlNd, AlMo, Al/MoW, Ti/Al/Ti, Cr, Al/Ta, Al/SiNx, SiON, SiNx, SiO2

$$2 \quad 3e \quad , \quad 2 \quad 3A-3A' \quad . \quad 3a$$

2 (520) , 2 (200), (300) (500), (510) (400) (250) 가 .

$$\begin{array}{ccccccc} & (500), & & (510) & & (520) & & & & (500) \\ & (510) & & (520) & & & & (510) & & (520) \\ (500) & 1 & & 2 & & (511, 512), (521, 522) & & & & (255), (253) \end{array}$$

(344), (341) 2 (300) (321) (254) (325) (510) 1 (511) (400)  
 (430) (342), (343) (256) .

(241), (242) 0 (200) (221) (251) (400) (520) 2 (525) (Vdd) (25)  
 (225) (244) (243), (244) (420) (252)

2 3a 3b

3a (210) 1000 3000 (205) (210) / (SPC, solid phase crystallization)  
 (ELA, Eximer laser annealing) (220) 1 (

(300) 1 (200) (420) (220) (300) (320) (200) (220)

3b (215) / 2 (231), (235) )  
 (200) (230) / (410) (200) (230) (500), (510) (400) 2 (430) 1  
 (510) (520) (500) (

215) (510) (520) (500) ,  
 , 2 (510) (500) (520) (500) 1 2 (511), (515) ,  
 (520) (500) 1 2 (521), (525) .

(500) (520) 2 (525) (200) (231) ,  
 (510) 1 (320) (511) (300) (300) (400) 2 (4  
 30)

(230) / (231), (235) Mo, MoW, AlNd, AlMo, Cr, Al  
 Al/MoW, Ti/Al/Ti, Al/Ta 가

3c (230) (220) , p  
 (300) / (200) / (221), (225) . ,  
 (321), (325)

(240) 4000 8000 (240) SiNx, SiO2/SiNx, S  
 iON, PSG(phospho silicate glass) (mobile impurities)

3 ( (241), (243) / (231), (235) /  
 (221), (225) (242), (244) .

(400) 2 (300) (430) / (321), (325) (341), (342)  
 (343) , (510) 1 2 (

511), (515) (245), (246) (344), (345) (520) 1 2 (521), (525)

3d , (250) (251)-(256) 4 ( (250) (244) ) (200) (235) (250) (252) (235) (225) (243), (244)

(500) (520) 2 (251) (200) (221) (231) (525) (241), (242) (253) (521), (522) (245), (246) (510) 1 (511) (300) (3 (21) (344), (341)

(255) (500) (511), (515) (344), (345) (256) (300) (325) (400) (430) (342), (343)

3e , (260) , BCB(benzocyclobutene) 1 $\mu$ m (260) 5 ( (250) (265) (270) (280) (265)

가 (250) ITO , (290) 가 (250) ITO (250) ITO 4 ITO

가 Ca 300 가 Ni MgAg 100 200

$$C1 = C_{acryl} = \frac{\epsilon}{d} \epsilon_0 = \frac{3.0}{1.3\mu m} \epsilon_0 = 2.3077 \epsilon_0 / \mu m = 2.043 \times 10^{-17} F / \mu m^2$$

(C2) 3.9 SiNx 6.5 가 2000 SiO2 4000 SiNx , SiO2

$$C2 = \frac{1}{C_{(Acryl+SiO_2/SiNx)}} = \frac{1}{C_{acryl}} + \frac{1}{C_{(SiO_2/SiNx)}} = \frac{(0.433+0.318)}{\epsilon_0} \mu m$$

$$C2 = C_{(Acryl+SiO_2/SiNx)} = 1.548 \times 10^{-17} F / \mu m^2$$

6000 SiO2

(C3) .

$$C3 = C_{(Acryl+SiO2)} = 1.445 \times 10^{-17} F / \mu m^2$$
 .

SiO2/SiNx 25%

CMOS , 5 CMOS p  
7 가 가 . ,  
CMOS , /  
가 가 5 / 2 가 7  
+ / , 가 2 n n+ / n- p

tm

(57)

1.

/ ;  
;  
/ ;  
/ / ;  
;  
;  
/ /

2.

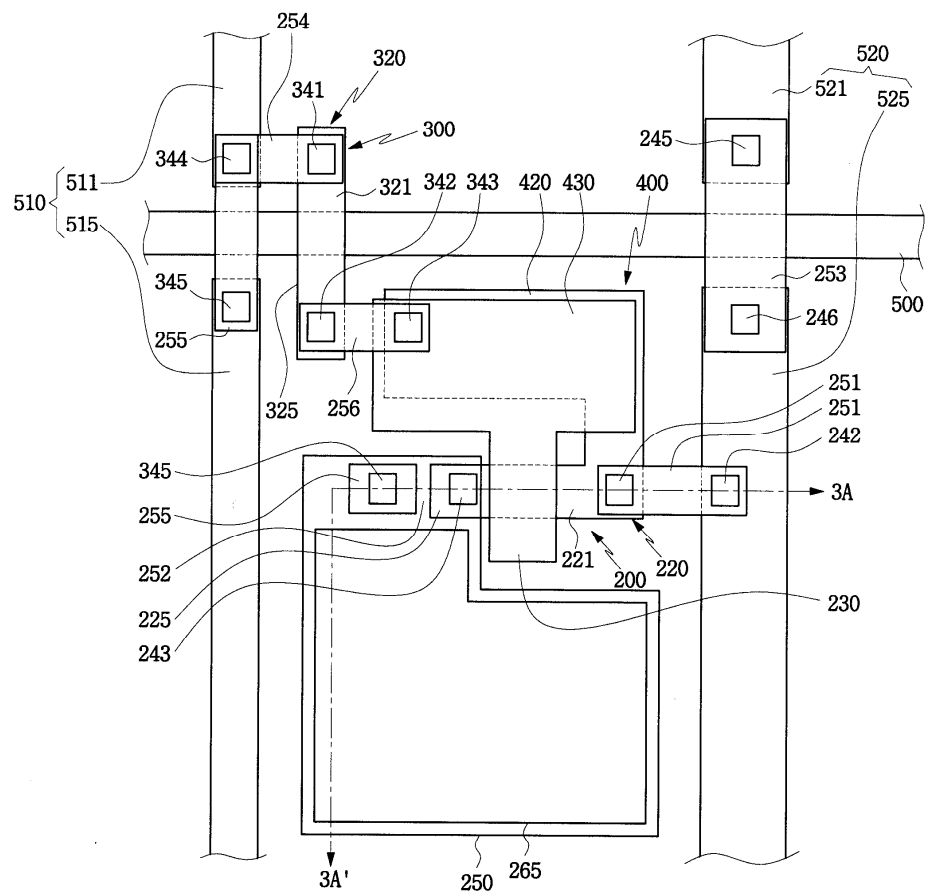
1 , Mo, MOW, AlNd, AlMo, Al/MoW, Ti/Al  
/Ti, Cr, Al/Ta, Al

3.

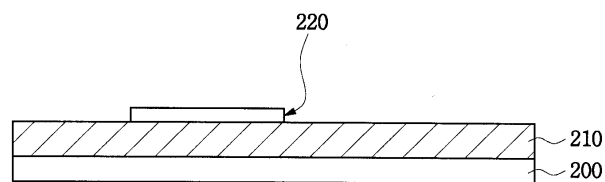
1 , SiNx, SiO2  
/SiNx, SiON



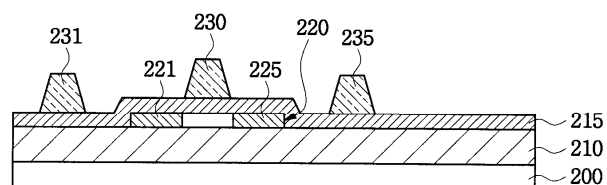
2



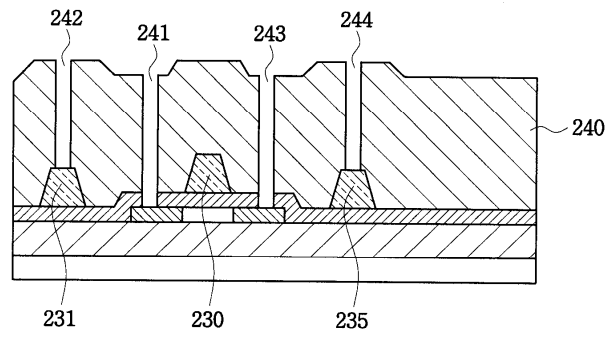
3a



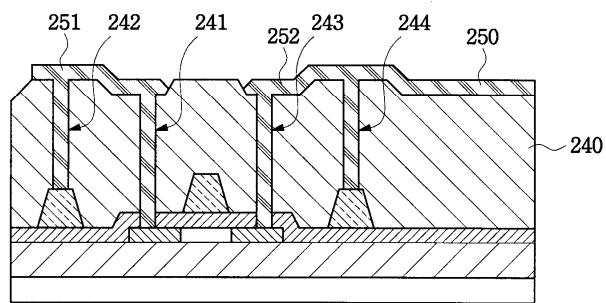
3b



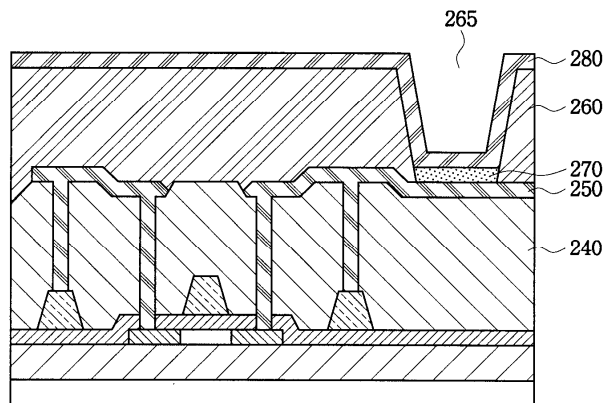
3c



3d



3e



|               |                                                                    |         |            |
|---------------|--------------------------------------------------------------------|---------|------------|
| 专利名称(译)       | 有机电致发光显示装置及其制造方法                                                   |         |            |
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| 当前申请(专利权)人(译) | 三星SD眼有限公司                                                          |         |            |
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| 发明人           | 서창수<br>배성식<br>정창용                                                  |         |            |
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| 其他公开文献        | KR100590249B1                                                      |         |            |
| 外部链接          | <a href="#">Espacenet</a>                                          |         |            |

#### 摘要(译)

有源矩阵有机电致发光显示装置及其制造方法技术领域本发明涉及能够简化工艺并降低寄生电容的有源矩阵有机电致发光显示装置及其制造方法。一种有源矩阵有机发光显示装置,包括:半导体层,形成在绝缘基板上,并具有用于源极/漏极的杂质区域;栅极绝缘膜形成在基板的整个表面上;栅电极形成在栅极绝缘膜和源/漏电极上;一种绝缘膜,形成在基板的整个表面上,并具有分别暴露源/漏区和源/漏电极的多个接触孔;形成在绝缘膜上的像素电极;以及多条连接线,用于分别通过多个接触孔连接源/漏杂质区和源/漏电极,其中一条连接线连接到像素电极。本发明可以通过在栅极绝缘膜上同时形成栅电极和源/漏电极来简化工艺,并减小源/漏电极和阴极之间的寄生电容。图3e

