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2004 07 13

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10-2003-0092873  
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2  
3  
4  
5  
가

2d

1  
2a 2j

3

< >  
 40 : 42 :  
 44 : 46 :  
 48 : 50 :  
 52 : 54 :  
 55 : 56 :  
 58 : / 60 :  
 62 : 64 :  
 66 :

(Flat Panel Display) 가 (OLED : Organic Electro Luminescence Di  
 splay) (Contrast)  
 (Carrier)

PM(Passive Matrix) AM(Active Matrix)  
 1 AM (10) (14)  
 AM (Buffer layer : 12)  
 (14) (12) (16) (16)  
 (18) 2 n p (14) (16) (18)  
 (14) / (15a, 15b) (10) (20)  
 (21a, 21b) / (15a, 15b) (21a, 21b) 3 (20)  
 (21a, 21b) (20) 4 / (22a, 22b)  
 / (22a, 22b) (10) (24)  
 (22b) (22a) (22b)  
 (26) (26) (24) (26) (26)  
 (26) (22b) (28) (28) (28) 7  
 (28) (10) (30) (28)  
 (32) (32)가 (10) Alq3. Anthracene, PPV(Poly(p-ph  
 enylenevinylene)), PT(polythiophene) (28) (36)  
 (34) (34) (10) (32)  
 가 AM 7  
 가 1 2 5

6 가 7 가 .  
 , 7 가 가 .  
 , 1 , 2  
 / ,  
 (Halftone mask) 3 4  
 / ,  
 5 1.0μm 2.0μm 0.3μm 1.  
 0μm (Cr) 가  
 / 5  
 2a 2i AM  
 AM 2a (40) (40)  
 1,000 3,000 (42)  
 (42) SiO<sub>2</sub> SPC(Solid Phase Crystallization) ELA(Eximer Laser Annealing)  
 (42) 1  
 2b (46) (44) SiO<sub>2</sub> (46) (44)  
 (46) (48) , n p (44)  
 (48) (44) / (49a, 49b) (40) SiO<sub>2</sub> (50) (50)  
 2c SiN<sub>x</sub>/SiO<sub>2</sub> (Sputtering) (52) 가 (52) ITO(I  
 ndium Tin Oxide) IZO(In<sub>2</sub>O<sub>3</sub>Zn<sub>5</sub>) (Work function)가  
 2d (52) (Halftone  
 mask) 3 (54) (54) (58a, 58b)  
 ) 3 (55a, 55b) (54) / (55a, 55b)  
 (56) (48) 0.3μm 1μm (48) (52)  
 1.0μm 2.0μm 가 가 (Cr)  
 가 MoSiO 가

) , 2e (54) 1 (50)  
 (54) 1 가 (48) (54)  
 , 2f (54) 2  
 (55a, 55b) (55a, 55b) / (49a, 49b) (50) (4  
 6) , 2 (54) 가 , 2  
 (48) (54) (48) (54)  
 (Ashing)  
 , 2g 2 (54)  
 3 (52) (56)  
 , 2h (55a, 55b) (50)  
 4 (55a, 55b) / (49a, 49b)  
 / (58a, 58b)  
 , 2i / (51a, 51b) (40) (60)  
 , 5 (56) (62)  
 (60) (60) SiO<sub>2</sub>, SiN<sub>x</sub>  
 (Acryl), PI(Polyimides), BCB(Benzocyclobutene)  
 2j (62) (56) Alq<sub>3</sub>, Anthracene, PPV(Poly(  
 p-phenylenevinylene)), PT(polythiophene) (64) (64)  
 (64) HTL(Hole Transporting Layer ) (66) ETL(Electron Transporting Laye  
 r)  
 3  
 / (58a, 58b) (40) (60) , 3  
 (56) (62) (60) (70) 5  
 , (60) (70)  
 , (70) (58a) (58b) (66) 가  
 , (60)  
 , 5  
 , 가

(57)

1. 1 ; 2  
 ;  
 / ;  
 / ;  
 , (Half-tone mask)  
 3  
 ;

2.

1  
1.0 $\mu$ m

1.0 $\mu$ m 2.0 $\mu$ m

0.3 $\mu$ m

3.

1

(Cr)

4.

1

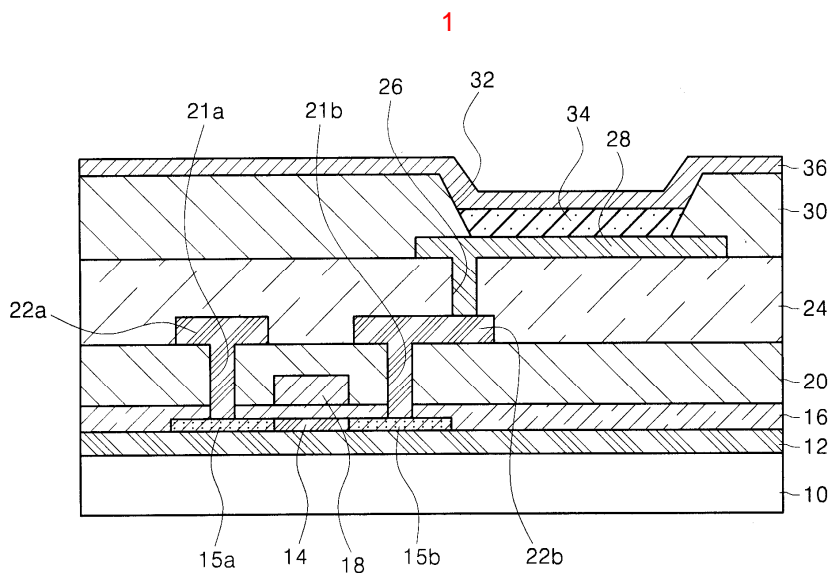
가

가

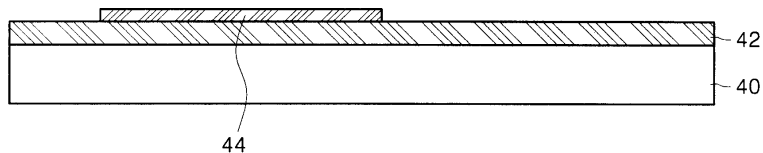
5.

1

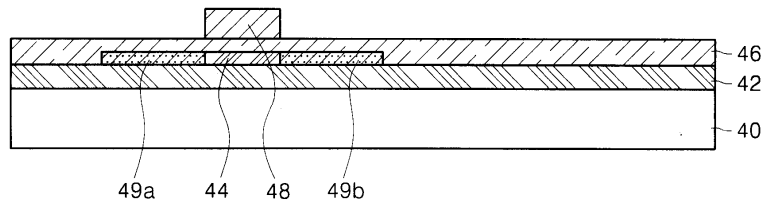
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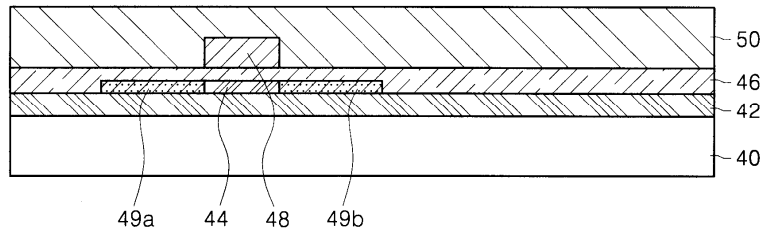
2a



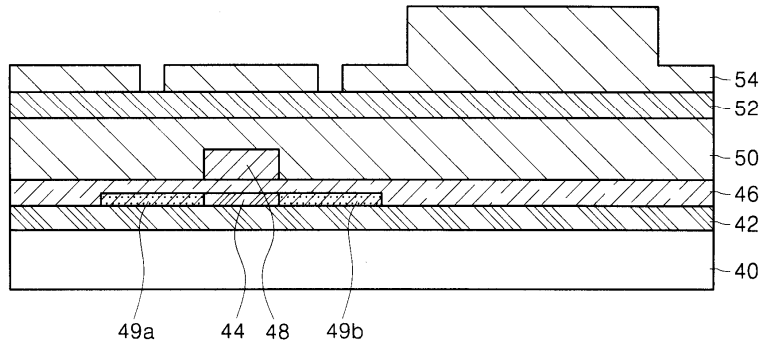
2b



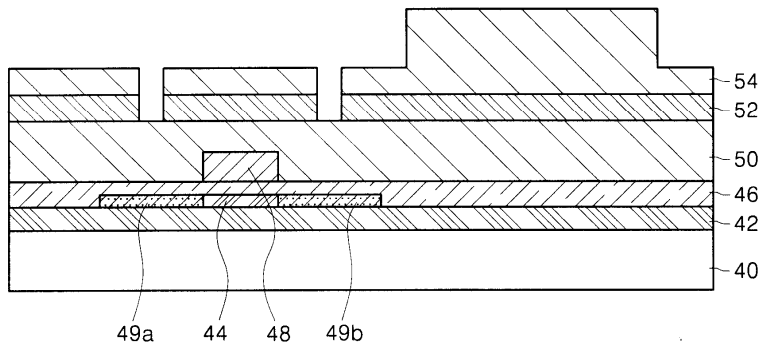
2c



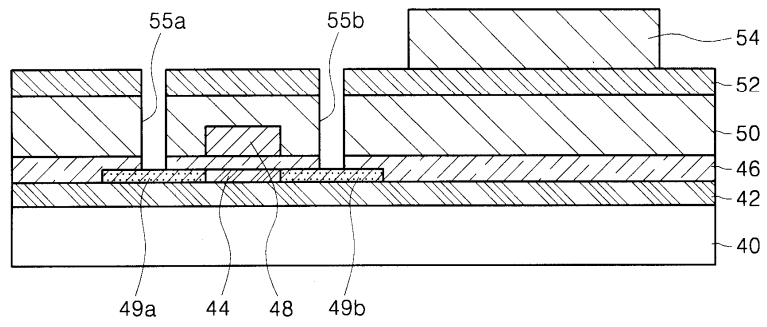
2d



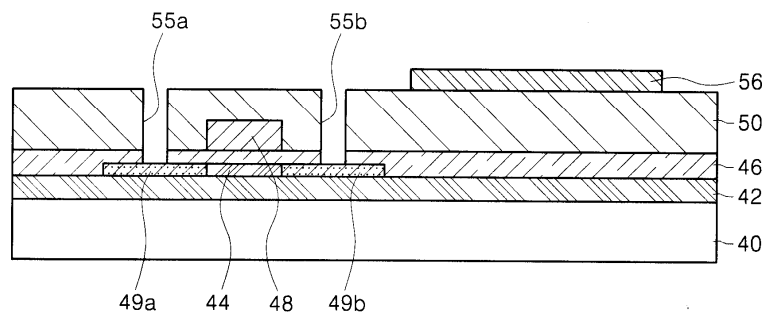
2e



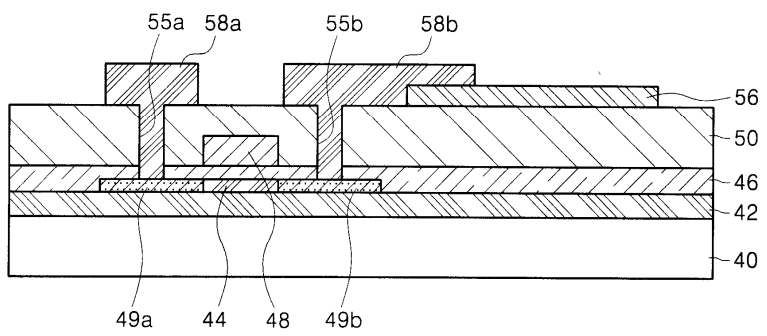
2f



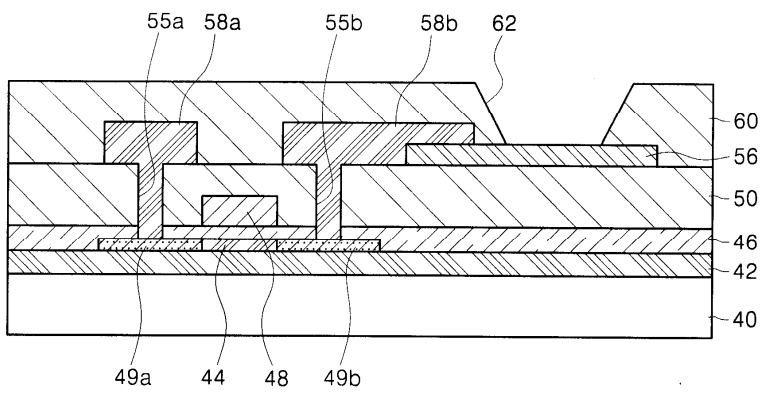
2g



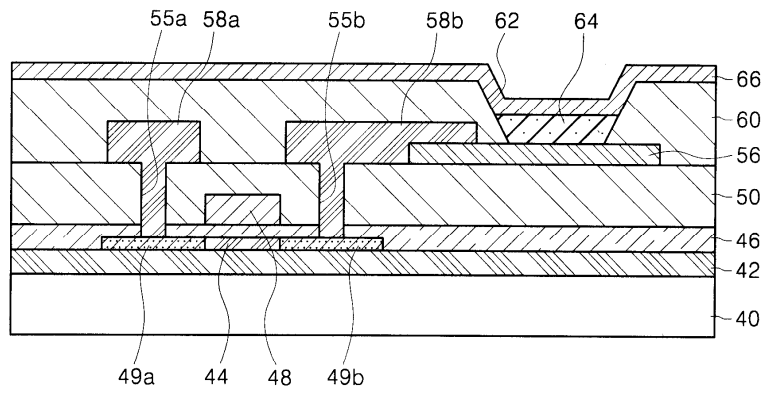
2h



2i



2j



3

