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2003 05 26

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(72) 2 112 403

1 206-18

(74)
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(54)

ESD

가
1 ;
2 ;
3 ;
4 ;
2
5 , 가
가 .

5

1a 1e
2a 2d

3a 3d
4
5
6 5 , ESD
7 5 , ESD

*
G1~G768: VGL:
VCOM: D1~D3072:

가

가

1a 1e
(1) (1)
(2) (1a) ; (2) (1)
(1b) ; (2) (3) (4)
(1d) ; (8) (4) (5) (6) (1c) ;
(4)가 (3) ITO (8) (6) (6)
(1e) (3) (8) (1e) (4)
, 1a (1) (1) (2) (3) (3)
, 1b (3) (2) (2)
, 1c (3) (4) (2) (2)
(3) (4) (5) (6) (4) (4)
, 1d (7) (6) (7) (7)
, 1e (7) (6) ITO (6) (4)
(1), (3), (7) (6) (8) (4)
(2) (G) (5) (D)
(D) (G)
, 가 (G)
(G)
(, ESD)가
, 2a 2d 가
(21) (21)
(22) (2a) ; (22) (21)
(23) (2b) ; (23) (24)

(2c) ; (25) (2d) .
 , 2a (21) (8) ,
 (5) (22) (23)
 , 2b (23) (21) (8) 가 , (23)
 (22) (23) (8) 가 , (23)
 , 2c (23) (24) (24)
 , 2d (24) (8)
 (25) 가 , (Vcom) 가 , 가
 (25) 가 가 (9) (25) 가
 , 가 .
 3a 3d (30) (25) (31) (31) , (31)
 (33) (34) (31) (32) (30) (33) (31,34)
 (35) (34) (30) (33) (31,34)
 (33) (32) (30) (33) (30) (3c) ; (30)
 , (3d)
 , 3a (30) (25) (31) (31)
 , (31) (31)
 , (31) (32) (SEAL DISPENSE)
 (32) , 가 (32) (30) (33)
 (32) (32) (32)
 , 3b (33) (7) (8) (34)
 (34)
 (35) (34)
 (35) (35) (35) (33)
 (35) 가 (35) 가
 (CONTRAST)가 가
 , 3c (30) (33) (31,34)
 (30) (33) 가 가 (30) (33) , (32)
 (30) (33)
 , 3d (32)가 (36)
 (36)
 3 (33)
 , 가 , ESD(GLESD1~GLESD768)가
 (2) 가 (G1~G768) ; (G1~G768) (G
 1~G768) ESD(GESD1~GESD768) (G1~G768)
 (VGL) ; (30) 가 , (VGL) ESD(CESD)
) (VCOM) ; (33) 가 가 , (VCOM
 M) ESD(DES D1~DES D3072) (D1~D3072) ; (VCO
 (VGL) ESD(CESD) ESD(DES D3072) ESD(ESD2)
) ESD(ESD1) ; (VCOM) ESD(DES D1) ESD(ESD2)

,
 (G1~G768) 1 (G1~
 G768) ESD(GESD1~GESD768) (VGL)
 (G1~G768) ESD(GLES D1~GLES D768) (VCOM) (33)
 (VGL) ESD(CESD) (30)
 ESD(ESD1) (D1~D3072) ESD(DESD1~
 DESD3071) (D1~D3072)
 가 가 (D1~D3072)
 ESD(ESD1) 가 (VGL)
 (VCOM) ESD(CESD) 가
 가 (30) ESD(ESD1) 가
 가 가

D 가 ESD ES

가 가

가 1 ; 가
 2 ; 가 가
 3 ; 4
 2 ;
 5

5 (33)
 (2) 가 ESD(GLES D1~GLES D768)가
 (G1~G768) ; (G1~G768) (G1~G768)
 ESD(GESD1~GESD768) (VGL) ESD(CESD)
 (VGL) ; (30) 가 (VCOM) (VCOM)
 (VCOM) ; (33) 가 가 (D1~D3072) ;
 ESD(DESD1~DESD3072) ESD(ESD) ESD(ESD)
 ESD(DESD1)

(G1~G768) 1 (G1~
 G768) ESD(GESD1~GESD768) (VGL)
 (G1~G768) ESD(GLES D1~GLES D768) ESD(GESD1)
 (G1) 가 (G1) 1
 (G1) (VGL) ESD(GLES D1)
 ESD (G2~G768)

(G1) (30) (VCOM) (33)
 (VGL) ESD(CESD)

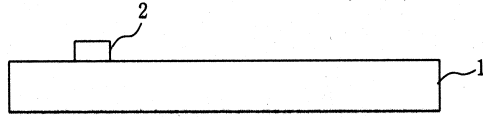
(30) (30) (33) (33) ESD(4 ESD1) (D1~D3072) , .
 (30) 가 (33) (D1~D3072) , ,
 , ESD(4 ESD1) , (30)
 (VCOM) (D1~D3072) 가 ,
 , 가 (D1~D
 3072) (D1~D3072) ESD
 , (D1~D3072) 가 (D1~D3072)
 6 ESD 가 , (NM1) ; 가
 가 (NM1) (NM2) ; (NM1) 가
 가 (NM3) . (NM1~NM3)가
 ESD ESD (NM1) 가 , (N
 M1)가 , (NM2) (NM2)
 (NM1) 가 , (NM3)
 (NM1~NM3)가 , 7 ESD
 , (DIODE1, DIODE2) ,
 가 가
 가 가 ESD ,
 가 가 가 ,
 , 가 , 가 .

- (57)
1. , 1 ; 가
 2 ; 가 가 가
 3 ; 4 ; 5
 2. 1 , 1 5 , 가
 가
 3. 1 2 , 1 5 가
 가 , 가 1 2 가 ;
 1 가 3

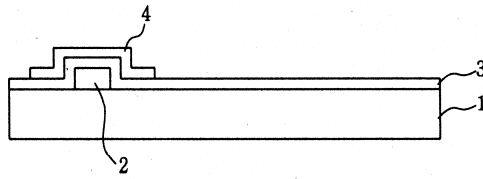
4.

1 2 1 2 1 5

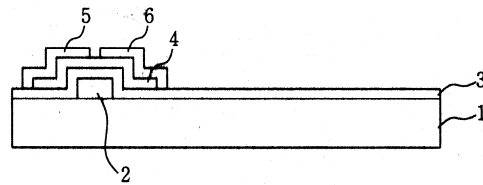
1a



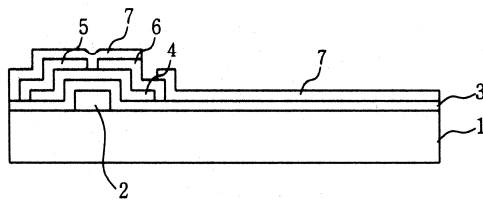
1b



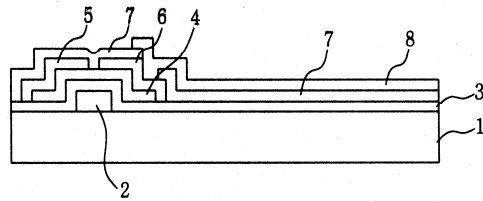
1c



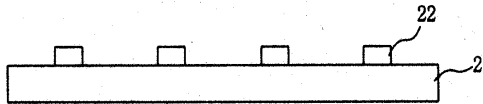
1d



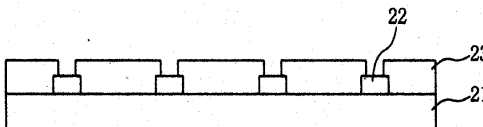
1e



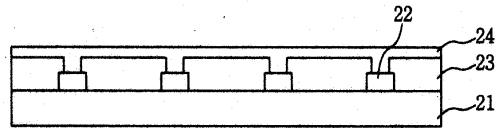
2a



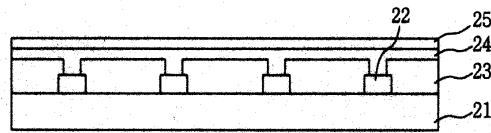
2b



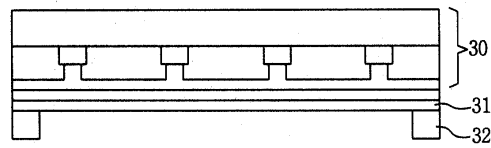
2c



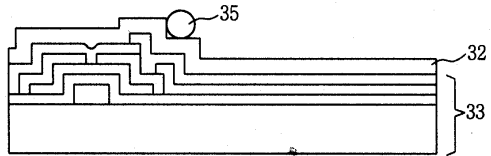
2d



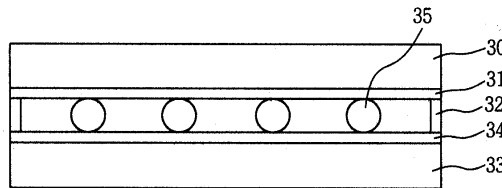
3a



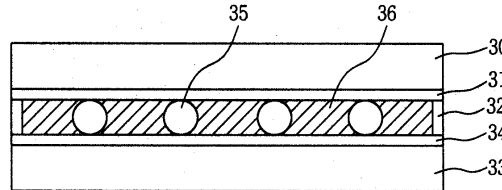
3b



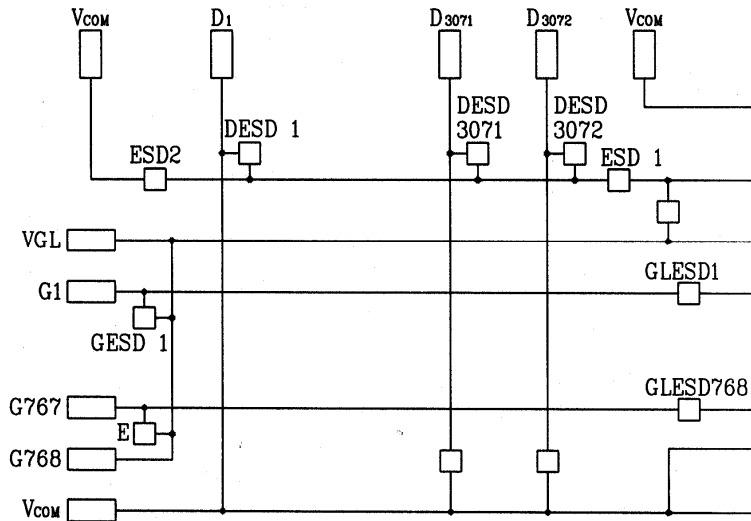
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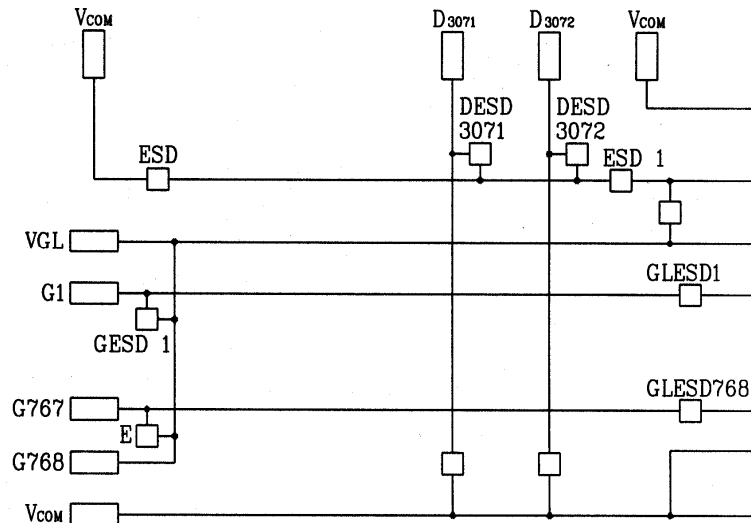
3d



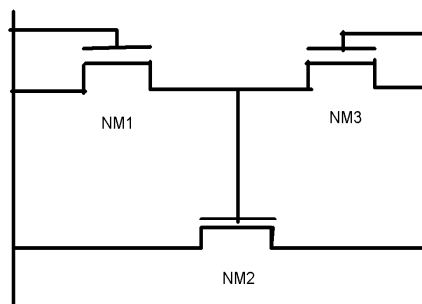
4



5



6



7

