

(19)
(12)

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(43)

2001 - 0081578
2001 08 29

(21) 10 - 2000 - 0007385
(22) 2000 02 16

(71) .
,
20

(72) 2 808 504

(74)
:

(54)

; 가 ; 가 ;
, 가 ;
가 ;

7

1

2

3a 3e 2 - .

4

5 2 - .
6 .
7 .
8 .

< >

1 : 24 :

14 : 14' :

13 : 200 :

(Liquid Crystal Display : LCD) (Thin Film Transistor : TFT)

가 가

가

(Active Matrix LCD : AM - LCD)가

가

1

(20) (10) (2, 4) (2,
4) (20) 가 (4) (10)
(4) (12) (10) 가 (8) , (8) (12)
(S) , (S) 가 (10) 가
(14)

(14) (P) .

(4) (2) (10) (4)

(2) 가 (sealant : 6) .

1 (2) 2 (2)

(2) (14) (14)

(24) (22) .

(S)가 (14) (S) (14) 가 (

28, 30) . (26), (

(S) 가 (55) .

350 가 .

(24) (22) ()가 ,

(S) (14) () .

(30) (14) (30') .

(21) (22) (21) , (14)

(21) (C_{st})가 (14) .

(S) (26) 가 , 가 (14) 가 ,

(26) 가 가 (14) 가 .

(S)가 .

,가 .

가 가 .

가 .

, 12 가 .

3a 3e .

(Inverted Staggered) 가

가 .

(etch stopper : ES) , 가 (back channel etch : EB) 가

n) (1) , (adhesio
(sputtering) .

3a 1 (26) (26) RC (21) (delay)
(hillock) ,
가 .

(26) (21) .

3b (26) (21) ,
(50) .

(50) (a - Si:H : 52)
(n⁺ a - Si:H : 54) .

2 (55) .
(54) (55)

3c , 3 (28) (28) (30)
(28, 30) (28) (24) .

, 3 (24), (28), (30) .
(28, 30) (28) (30)
(Ch) .

(S) (28) 가 (30) , 가 .

가 가
(S) 50 nm , (etching uniformity)

3d , 4 (55)
(56) (56) (55) (SiN_x) (SiO₂)
BCB(Benzocyclobutene) .
(56) .

| | | | | | | | | |
|-------|-----------|-------|--------------------------------------|---|------------|------------------------|------------|----|
| 0') | (56) | | 가 | , | | 가 | | (3 |
| | | (30') | | | | | | |
| 3e | | | (Transparent Conducting Oxide : TCO) | | | | 5 | |
| | (14) | | | | | ITO(Indium Tin Oxide)가 | | |
| | (14) | | (30') | | | (30) | | |
| 4 | 3a | 3e | | | | | | |
| ST200 | | | (1) | , | | (1) | (Cleaning) | |
| | | | | , | (Particle) | | | |
| ST210 | | | | | | | | |
| ST220 | | | | | | | 3000 | |
| ST230 | | | | | | | | |
| ST240 | ST230 | | | | | | | |
| ST250 | | | | | | | | |
| ST260 | | (TCO) | ITO | | | | | |
| | | | | | | | | |
| | 가 | | 가 | , | | | | |
| | 가 | | | | 5 | | | |
| 5 | 2 | - | | | | | | |
| 5 | | | (1) | | | (50) | | (|
| 50) | (24) | | | | | | | |
| | (24) | | (56) | , | | (24) | | (|
| 56) | (14, 14') | | | | | | | |

(14, 14') 가 , , ,
 , (ITO) (14, 14') 가 (14, 14') -
 , (13) (13) (14, 14') .
 effect) (13) , 가 가 , (point d
 4') 가 500 (14, 14') ITO가 가 , (14, 1
 (pattern)
 ,
 6 가 , ,
 , , / .
 , 6 .
 , 가 (V_g)가 가 , (V_d)가
 가 가 가 가
 , 6 (V_p)가
 , 가 가 (V) ,
 , 6 V 가 .
 V .

; 가 ;
 ; 가 ;
 ; 가 ;

, ; 1 ; 1
 ; 2 ;
 , ;
 .
 , .
 7 ,
 (14, 14') (24) () (56) (200) .
 (200) (14, 14') 7
 .
 (14') (200) (13) (13) (14)
 (14) (24)
 , (13) (14, 14')
 , (13) (13) (14')
 .
 (13) (13) (24) (13)
 .
 (13) (13) (14, 14') (24)
 (,) 8
 .
 8 (13)
 (V_p) , (V_g, V_d)가 가 , (V_d) 가 가
 , (V_p) 가
 , 8 가 가 가 ,

(57)

1.

;

가

;

가

;

,

;

,

가

.

2.

1

,

- -

(ITO)

.

3.

;

1

;

1

;

2

,

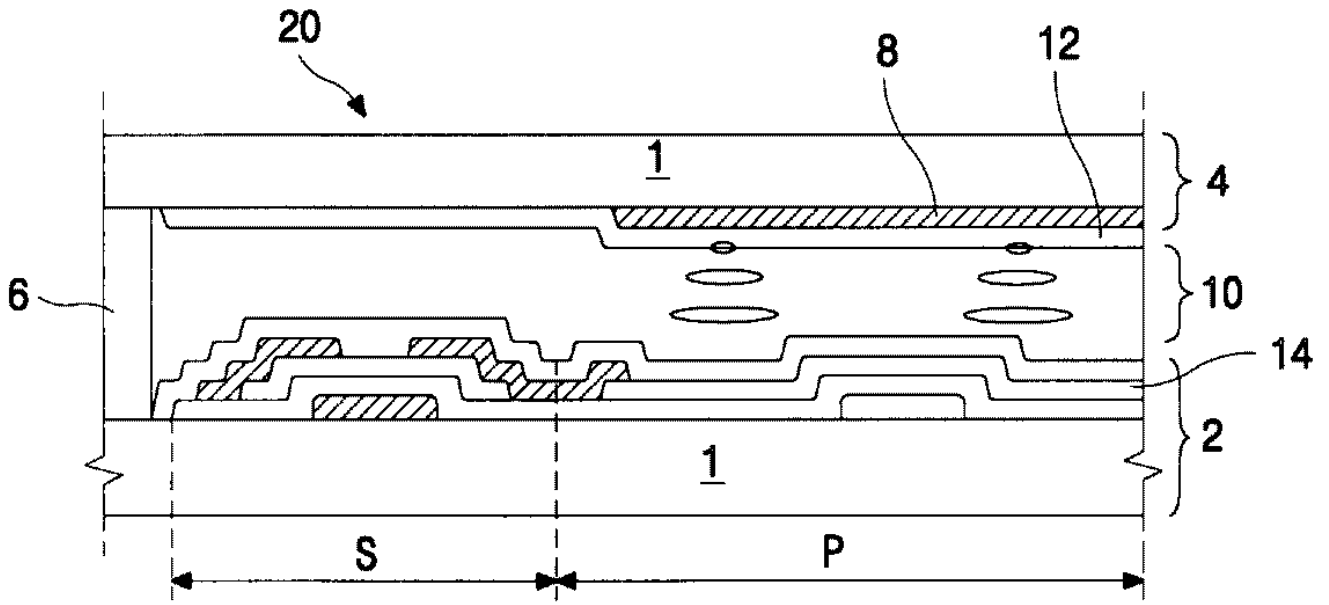
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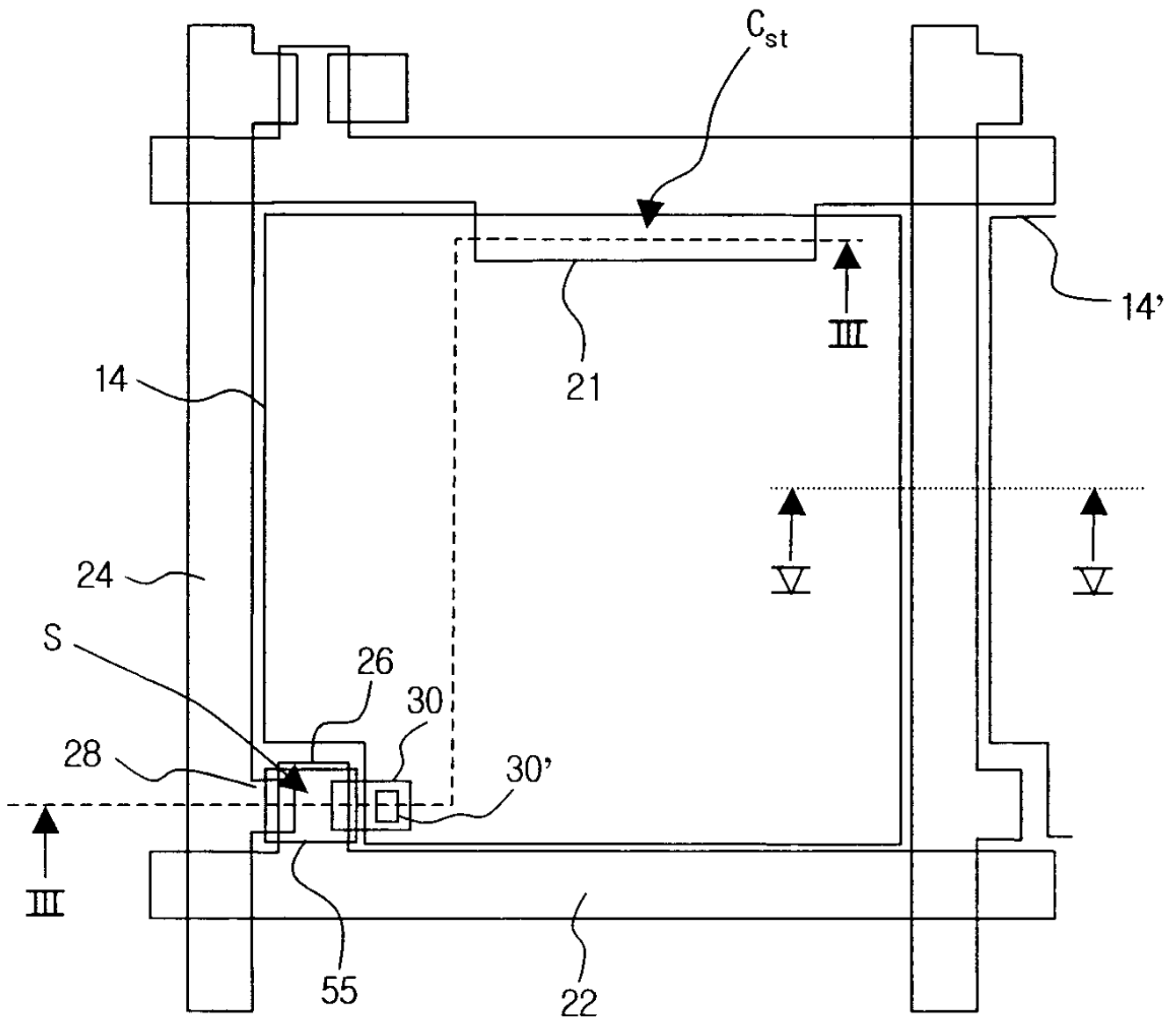
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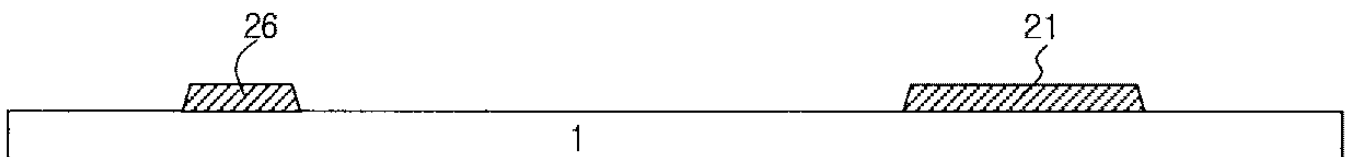
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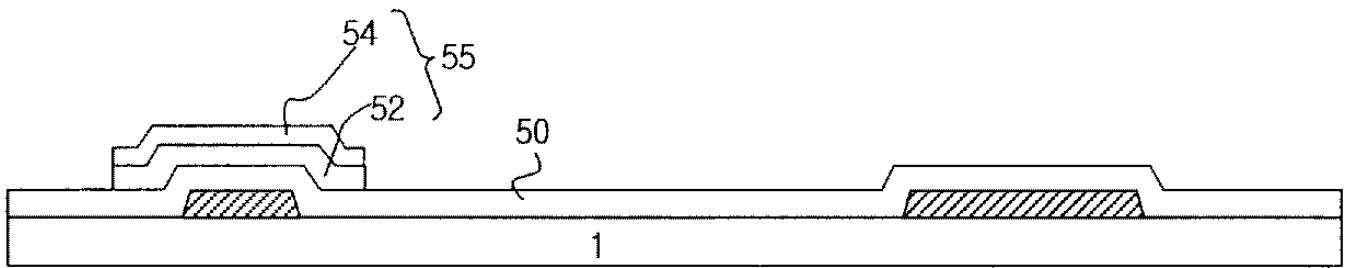
2



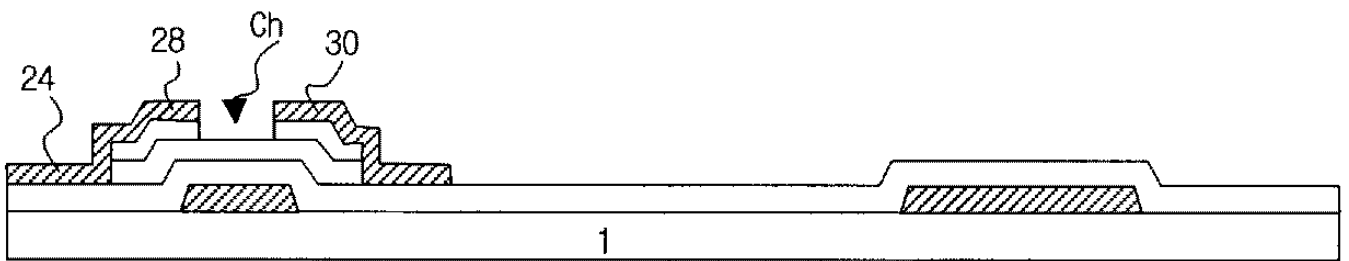
3a



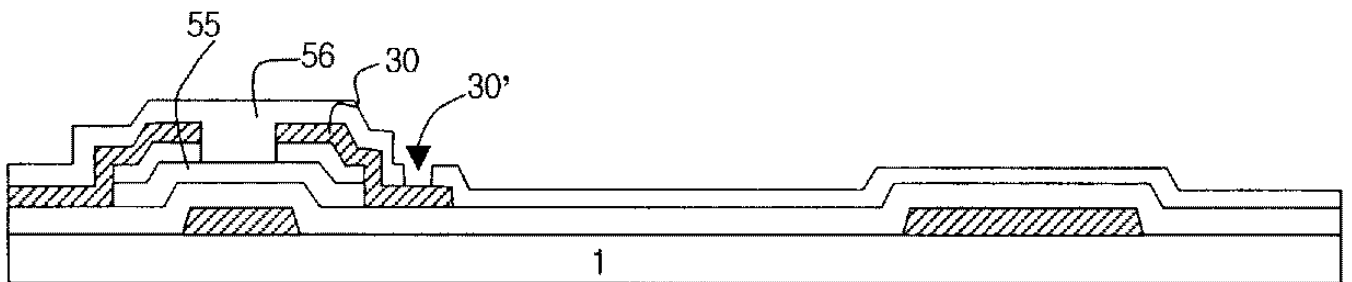
3b



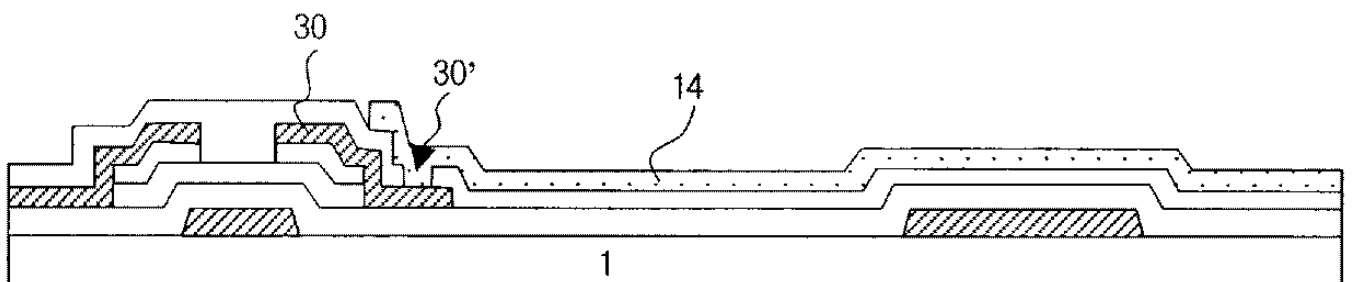
3c

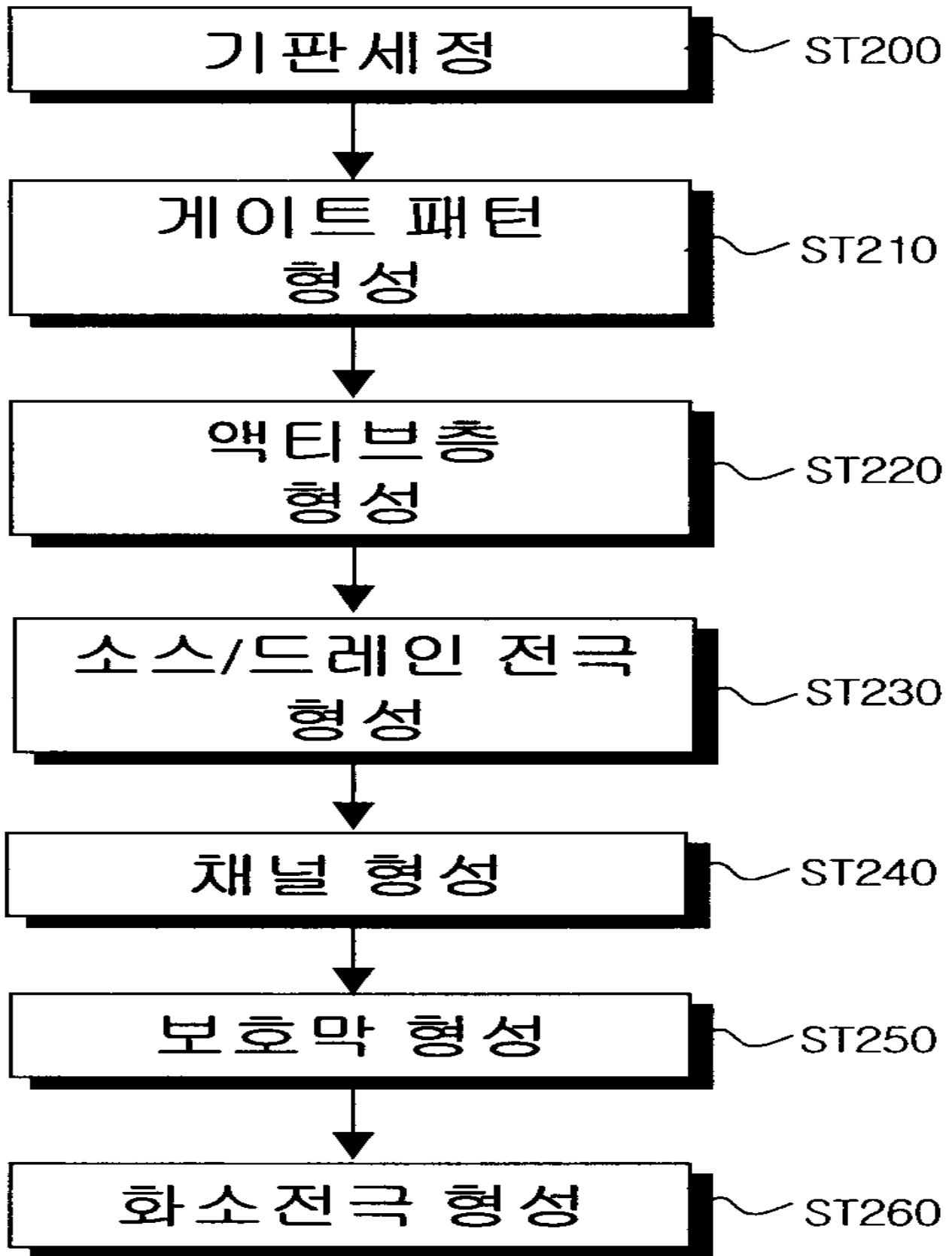


3d

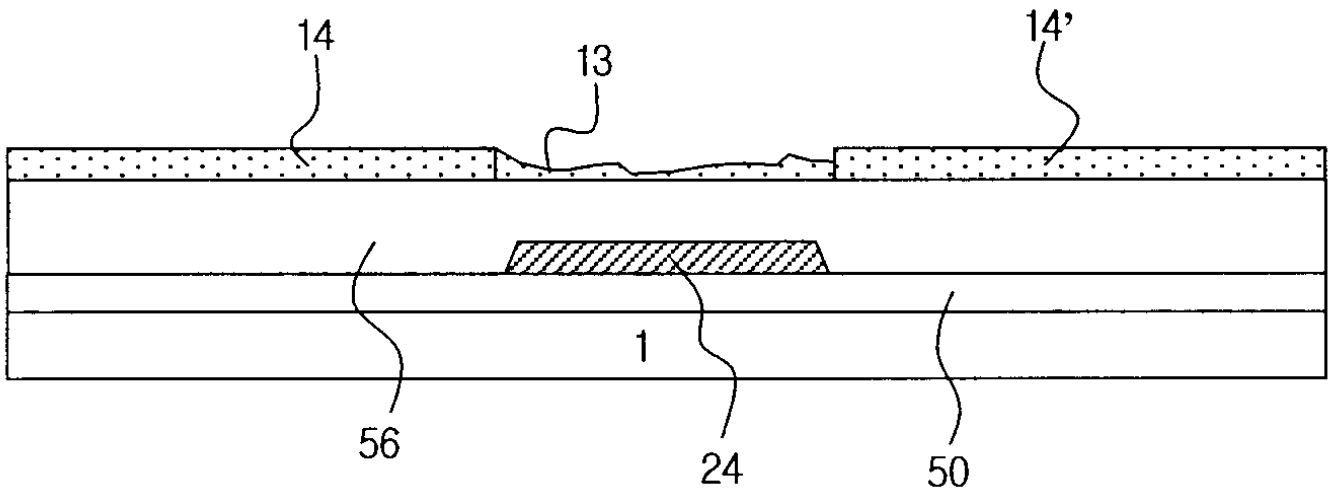


3e

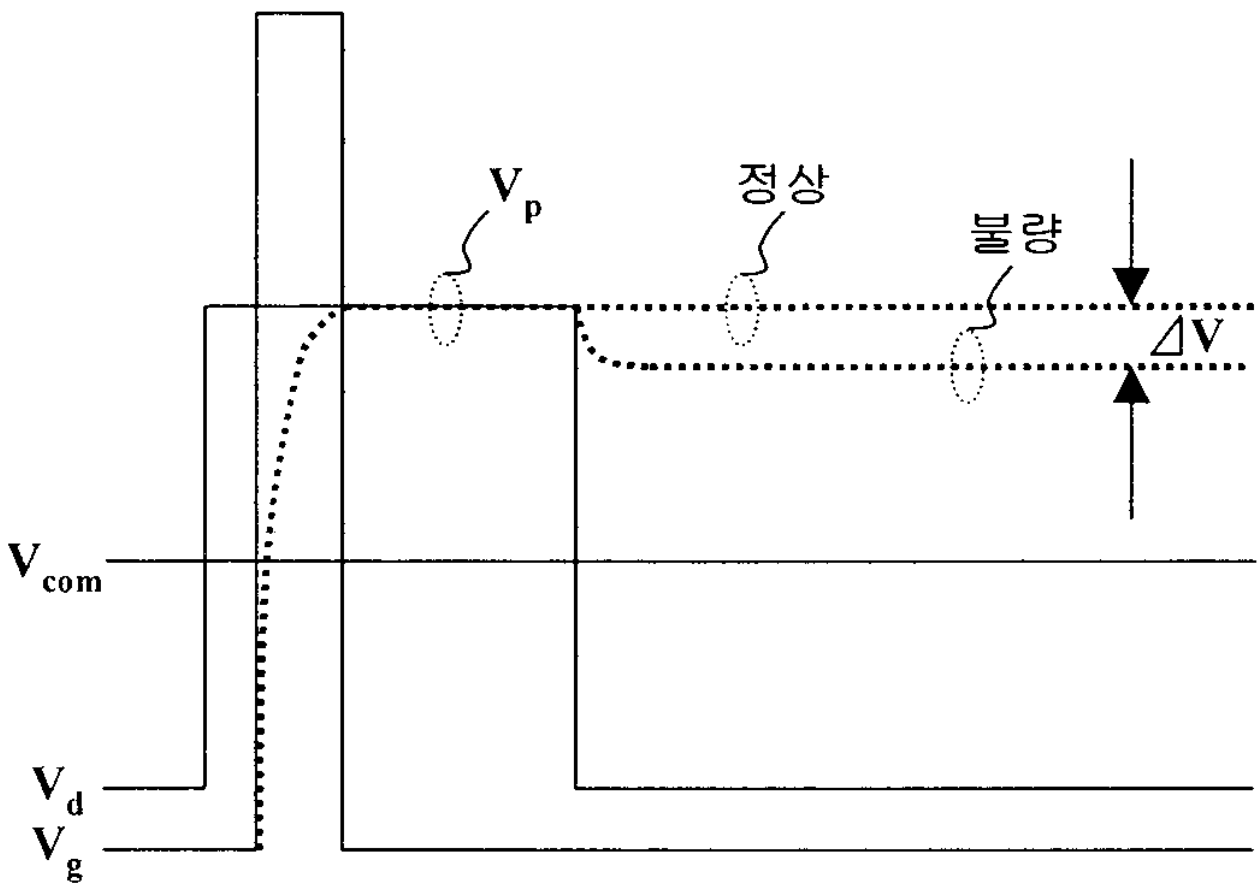




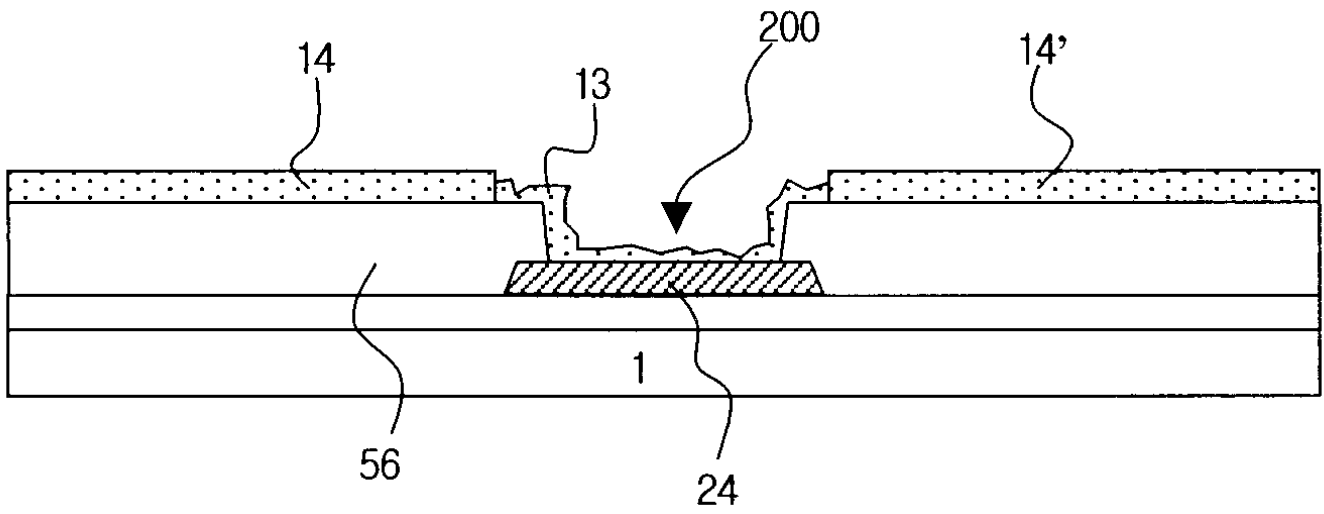
5



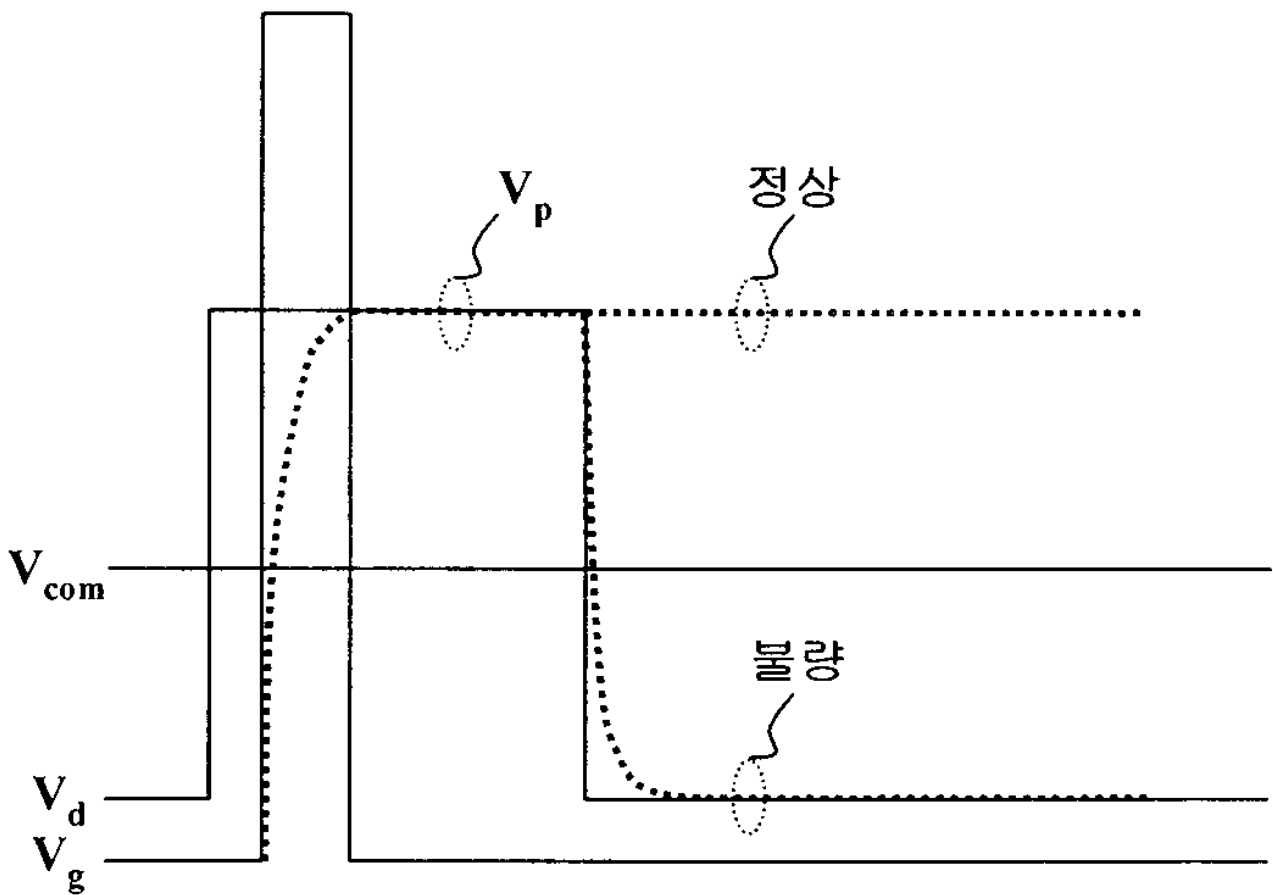
6



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|----------------|---|---------|------------|
| 专利名称(译) | 液晶显示装置和液晶显示装置的制造方法 | | |
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| 发明人 | 김종성 | | |
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| CPC分类号 | G02F1/136227 G02F1/1368 | | |
| 其他公开文献 | KR100675088B1 | | |
| 外部链接 | Espacenet | | |

摘要(译)

本发明提供一种液晶显示装置，包括：基板；栅极和数据线分别在水平和垂直方向上形成在基板上；一种薄膜晶体管，用于接收栅极和数据线中的信号；覆盖薄膜晶体管和基板的整个表面的绝缘膜，该绝缘膜具有数据布线孔，数据布线在该数据布线孔中露出；并且像素电极形成在绝缘膜上并从薄膜晶体管接收信号。 7

