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(43)2003 - 0003122  
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(22) 2002 06 29

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(71) 가 가  
2 5 5

(72) 3 112 - 3

8 - 41 - 7

- 416

(74)

:

(54)

,  
 . (1) ,  
 , (30)가  
 . (30) 가 (1)  
 . (1) (30) , (1) 4 (50)

8

, EL , , , , ,

1 EL .

2 EL .

3 EL 1 , .

4 1 .

5 1 .

6 1 EL .

7 .

8 1 .

9 EL 2 .

10 EL 3 .

11 1 EL .

12 .

1 :

1a, 30a :

2 :

Ca, Cb :

Da, Db :

Sa, Sb :

3 :

Ga, Gb :

4 :

5 :

11 :

12, 13 :

14 :

15 :

16 :

30 :

30h :

30p :

31 :

32 : CCD

33 :

40 :

50 :

60 :

61 :

62, 63 :

64 :

(Electroluminescence: EL)

EL 가 EL

, EL

가

.

EL , ITO( ) , MTDATA(4,4 - bis(3 - methylphenylamino)biphenyl) (4,4,4 - tris(3 - methylphenylphenylamino)triphenylanine)  
 , (Quinacridone) Bebq2(10 - [h] )  
 , Bebq2 , . ( )  
 . , EL 가 ,  
 가 가 ,  
 가 , 가 ,

(G), EL (B) 3 , EL EL 가 EL ,

, , . , EL

, , EL

, ) , , EL (

EL , EL ( , ) EL ,

, EL ,

EL , EL

(1) , EL ,

(2) , EL 가 ,  
2

1 , ,  
 , 3  
 2 , 1 , 가  
 3 , 1 2 , ,  
 4 , 1 , ,  
 5 , 1 , ,  
 6 , 1 ,  
 7 , 6 ,

[ 1 ]

, EL EL  
 1 ,  
 1 , ) EL 1 EL ( EL : EL  
 , EL , EL (TFT)  
 , 1 , EL GL  
 DL , EL , EL ( )  
 가 B 가 , EL 가 R, G,  
 , EL , GL  
 TFTa가 CE , TFTa Sa , (Cr) (Mo) DL  
 , TFTa가 CE

가 .

Sb EL CE , EL (11) , TFTb Gb , TFTb  
IL IL 가 EL , CE Db , EL Gb 가 ,  
IL 가 EL .  
 , CL CE CE , TFTb Gb CL 가 .  
2 , 1 . , 2 (a) D - D , 2 (b) E - E  
EL . 2 , EL (1) , ,

, CE TFTa , 2 (a)  
Sa Da , Ca (1) (2) (2) ,  
CE가 Ca (Lightly Doped Drain) LDD, ,  
 , (Cr) (Mo) (2) CE , (3)  
CL Ga,  
(4) , (4) Da ,  
DL Da가 DL , (5)  
DL (4) ,

, EL TFTb , 2 (b) . , (1)  
 , 2 (a) (2) (2) , TFTb  
Cb Sb, Db가 . , (2) 2 (a)  
(3) , (3) Cb , (Cr)  
(Mo) Gb가 Gb (3)  
 , 2 (a) (4), (5) . ,  
(4) Db , (4) (5)  
Db IL , (4) Sb ITO(Indium  
Tin Oxide) (11)가 . (11) , EL

EL ,

a. (11)

b. (12) : NBP

c. (13) :

(R)... (Alq<sub>3</sub>) (DCJTB)  
 (G)... (Alq<sub>3</sub>) (Coumarin 6)  
 (B)... (BAIq) (Perylene)

d. (14) : Alq<sub>3</sub>

e. (15) : (LiF)

f. ( ) (16) : (Al)

· 「NBP」 ... N, N' - Di((naphthalene - 1 - yl) - N, N' - diphenyl - benzidine)

· 「Alq<sub>3</sub>」 ... Tris(8 - hydroxyquinolino)aluminum

· 「DCJTB」 ... (2 - (1,1 - Dimethylethyl) - 6 - (2 - (2,3,6,7 - tetrahydro - 1,1,7,7 - tetramethyl - 1H,5H - benzo [ij]quinolizin - 9 - yl)ethenyl) - 4H - pyran - 4 - ylidene)propanedinitrile

· 「Coumarin 6」 ... 3 - (2 - Benzothiazolyl) - 7 - (diethylamino)coumarin

· 「BAIq」 : (1,1' - Bisphenyl - 4 -olato)bis(2 - methyl - 8 - quinolinplate - N1,08) Aluminum

(12) , (14), (15), (16) , 2 (a)  
 (13) , (11) , 2  
 (a) , (5) , (10) .

EL

3 , EL 3  
 (1) TFT (11) ( 100), , (12, 13) ( 110).

(12, 13) (1) , (12, 13) ,  
 ( 120). , 4 (14)  
 ( ) (Ni) (30)가 , (30) ,  
 (34) (31) .

, (12, 13) (1) , (1)  
 (30) , 4 CCD(Charge Coupled Device) (32) ,  
 (30) (30a) (1) (1a)  
 , (30a, 1a)가 , (1) (30)  
 ( 3 130). 4 (30a, 1a)  
 , 50μm, 가 50μm .

R, G, B

(13, 14)

(1)

R, G, B

(14)

(30)

( ) (11)

( ) (11)

가

R, G, B

가

가

5 (a) (30)

(1) ( )

(30)

(30) 5 (a)

16

, 16

(30p)

16

(30p)

4

(30

p)가

4

(30)

(11)

(30h)가

(30p) 5 (b)

5 (a)

(30)

(1)

(1)

(31)

4

(34)

( ) (40)

(1

4) 가

(1)

(

3

140).

(30)

6

6

(

( ) (11)

EL

( EL

(40)

가

(30)

(30)

(3

oh)

(1) (

(13))

(1)

(15)

( ) (16)

( 3

150).

(15)

( ) (16)

,

(1)

(30)

(1)

가

(1)

(1)

7

7 (a)

1 7 (b)

K

7 (a)

2

7 (b)

L(L &gt; K)

3 7 (c)

K

7 (a)

( 7 (c))

( 7 (b))

7 (a)

가

가

g,

E,

t

7 (b)

n

1



1

$$n = K_{gp}^4 (1 - \sigma^2) / 6.4 E t^2$$

1 , 가 , .

, 8 (1) 4 (50) , (1) 가 , (1) 4 , (1) .

, 4 , (1) (50) 가, (1) , (1) .

, (50) , (30) (1) . (50) (1) (50)가 , (1) (1) .

, 7 (12, 13) , (50) L (50) , (1) , (1) .

, (50) (1) , (1) . (31) (50) 2 (31) (31) (50) 5 (a) (30) (50) 5 (a) (50) (31) (50) (1) 가 , (50) .

, 가 .

(1) (1) 4 (50) , (1) (30) . (30) (1) .

, , .

, (50) (1) , (1) EL . (31) .

[ 2 ]

, EL EL 2 , 1 .

2 , 1 (1) (30) , 가 .

, 5 (a) (31)  
 (33) (33) , 9 (1)  
 (1) (30) (1)  
 , (1)  
 , (33) , (1) (50)  
 , (33) , (1)  
 , (33) , (1)  
 , (33) , ( ) 가  
 (1) (33) (1)  
 , (33) (31) (1)  
 (33) (30) (1)  
 (33) 가 (30) (33)  
 ,  
 , 1 (1) 가  
 (2) (1) (33) , (1)  
 (3) (33) 가 (1) (30)  
 , (1) (30) (1) (33)  
 (30) (1)  
 , 2 ,  
 (33) (31) (1) (34)  
 (33) , (31) (33) (1)  
 , EL 가 , (33) (1)  
 , EL  
 [ 3 ]  
 , EL EL  
 3 , 2  
 3 , 2 (1) (30) , 가  
 , (1) (1)  
 (1) 가  
 , (1) (1) 가

10 , 10 (60)  
 , (61) (62, 63) (64)  
 , (60) (1) , (1)  
 , 11 , (1) (30)  
 50) (1) , (1) (200), (60) ( (210). , (1) (33)  
 , (1) (30) (220). , , (1)  
 (60) (50) (1) , (1)  
 (30) (33) (1) , (60) (50) (230).  
 , (30) , (1) EL (240).  
 , 1 (1) , 2 (2), (3)  
 가  
 (4) (1) (1) 가 , 가 (1) (30) (30)  
 , (1)  
 , 3 ,  
 , 2 (1) (30) , 가  
 , 1 (1) (30) , 가  
 [ ]  
 , 가  
 , 5 4  
 ,  
 ,  
 (1) 4 , (50) , 12  
 , 3 2 ,  
 , 가 , 4 , 가 , 4  
 , 12 ,  
 - 4 , 3  
 , (31) 5 (a) (30) ,  
 (50)  
 , EL

· R, G, B EL , ,  
 , R, G, B ,  
 ·  
 · EL , EL  
 · , EL , EL 가 E  
 L , , ,

1 , 3 가  
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 2 ,  
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 3 ,  
 4 ,  
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 5 ,  
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 6 ,  
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 7 ,

(57)

1.  
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3  
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2.

1 ,  
 , 가  
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3.

1 2 ,

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4.

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5.

1 ,

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.

6.

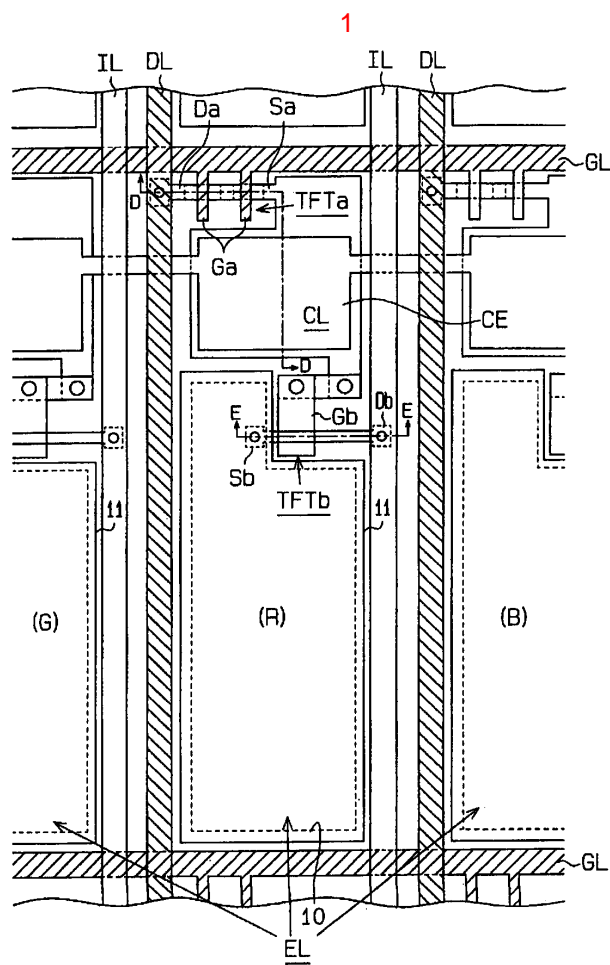
1 ,

.

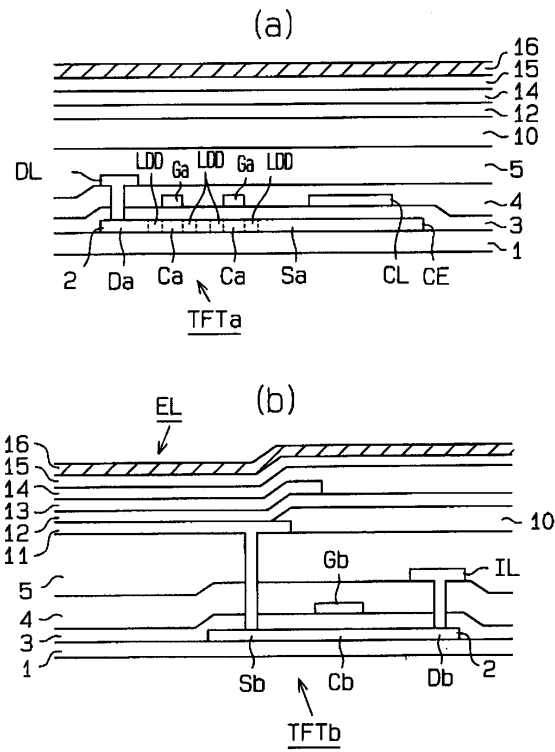
7.

6 ,

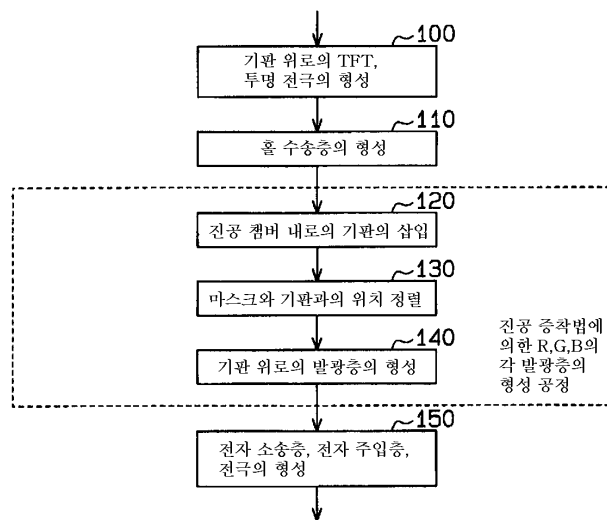
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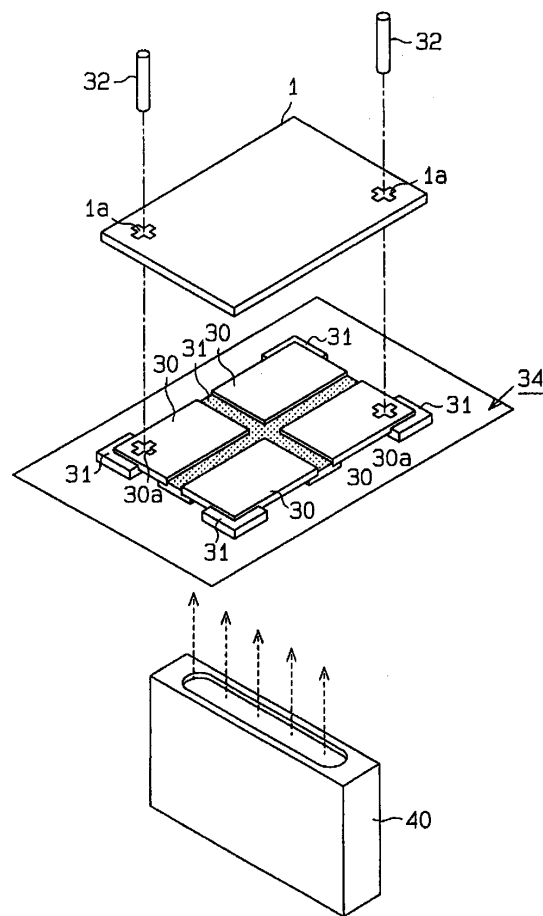
2



3

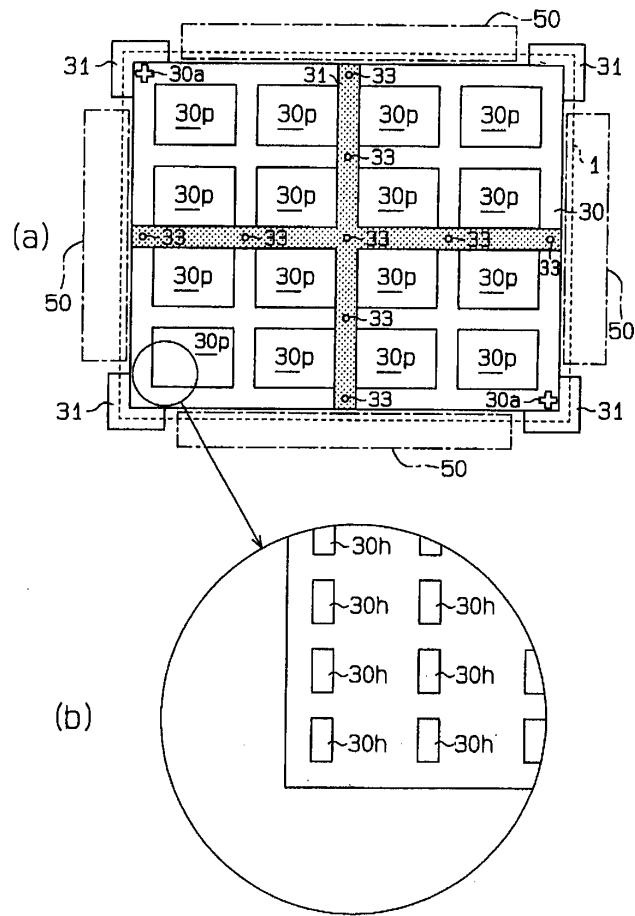


4

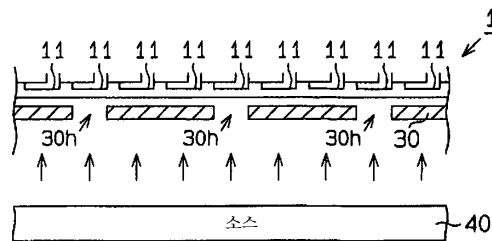




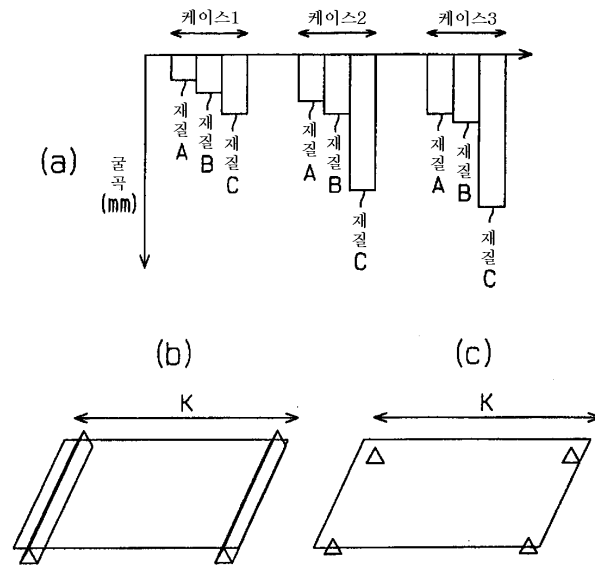
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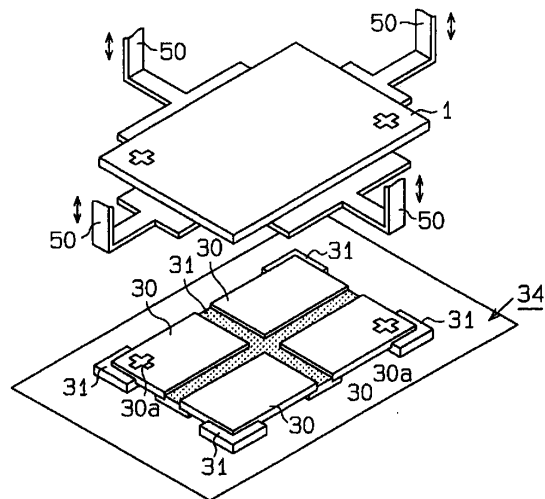
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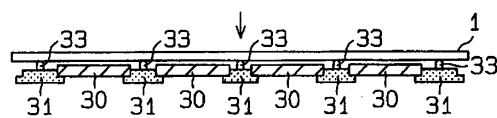
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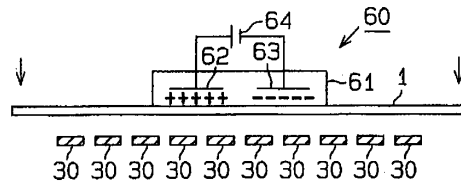
8



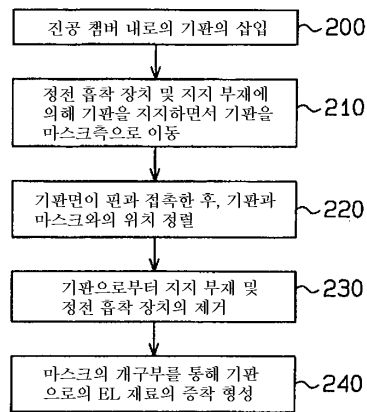
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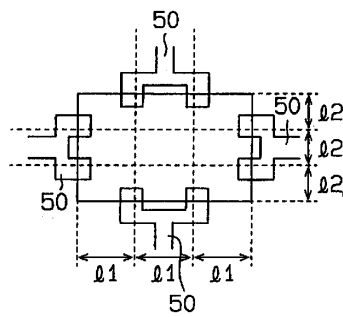
10



11



12



专利名称(译)	电致发光显示装置的制造方法		
公开(公告)号	<a href="#">KR1020030003122A</a>	公开(公告)日	2003-01-09
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[标]申请(专利权)人(译)	三洋电机株式会社 山洋电气株式会社		
申请(专利权)人(译)	三洋电机有限公司是分租		
当前申请(专利权)人(译)	三洋电机有限公司是分租		
[标]发明人	YAMADA TSUTOMU 야마다쯔토무 NISHIKAWA RYUJI 니시가와류지 OHIMA SUSUMU 오이마스스무		
发明人	야마다쯔토무 니시가와류지 오이마스스무		
IPC分类号	H01L51/50 C23C14/04 G09F9/30 H05B33/10 G09F9/00 H01L51/40 H05B33/12 H01L27/32 C23C14/50 H01L51/00		
CPC分类号	H01L27/32 C23C14/042 H01L51/001		
代理人(译)	LEE , JUNG HEE CHANG, SOO KIL		
优先权	2001198927 2001-06-29 JP		
其他公开文献	KR100485300B1		
外部链接	<a href="#">Espacenet</a>		

#### 摘要(译)

本发明提供一种电致发光显示装置的制造方法，其能够在通过掩模形成电致发光元件时更有利地对准掩模和基板。在玻璃基板1中，其上沉积有构成电致发光元件的发光层的表面垂直向下插入真空室中。掩模30设置在该真空室中。发光层的材料通过掩模30的开口粘附到玻璃基板1上，从而粘附发光层。在对准玻璃基板1和掩模30时，玻璃基板1的四个侧面由侧支撑构件50支撑。

- 1 - 8 指数方面 位置对准，EL元件，显示面板，发光层，玻璃基板，支撑构件，显示装置

