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H05B 33/26

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(24)

2002 10 25
10 - 0358315
2002 10 11

(21)
(22)

10 - 2000 - 0057597
2000 09 30

(65)
(43)

2001 - 0050782
2001 06 25

(30)

1999 - 281792

1999 10 01

(JP)

(73)

가 가

2 5 5

(72)

25

가

1847 - 1

(74)

:

(54) E L

가 , .

(25) , WD4 , TN2 HS2 WD3
. 가 CN1 . CN1 ,
(100) (25) .

2

EL , , , ,

1		EL	.	
2	1	A - A	.	
3	4	CN2	.	
4		EL	.	
5		EL	.	
6	5	A - A	.	
7	5	B - B	.	
8		EL	.	
9	8	A - A	.	
10	8	B - B	.	
11	5	A - A		TFT EL
12	5	B - B		TFT EL

 $\wedge$

1 : 1 TFT

2 :

3 :

4 : 2 TFT

6 :

8 :

14 :

20 : EL

GL :

DL :

CL :

VL : VL

CN1 :

CN2 :

TN1 TN5 :

, (Electro Luminescence : , 「EL」 .) EL 가 CR
T LCD , EL
(Thin Film Transistor : , 「TFT」 .) EL
8 EL , 9 8 A - A , 10 8
B - B .

, GL DL 가
1 TFT(1)가 , TFT(1) (2)
(3) , EL 2 TFT(4) (15) 2 T
FT(4) EL (6) , EL VL

, (2) (7) 1 TFT(1)
(3) , (7) . (8)
2 TFT(4) (5) 가

, 1 TFT1 9 10 .

, (10) , (Cr), (Mo)
1 (11) . 1 (11) , 8
GL 1 (11) 9 1 (11) ,
(11) (2) (2) , 8
, 1 TFT(1) 2 TFT(4) ,
CL .

, (7) (p - Si .) 1 (12)
(12) , LDD (Lightly Doped Drain) 가 . ,
, , (12) , (

13) . (13) , (12) , Si

, (7), (12) (13) , SiO_2 , SiN SiO_2
 (14) , C1

DL PLN . EL , EL ,

가 PLN .

, EL 2 TFT4 8 10 .

(7) (10) , 1 (11) 2 (15) ,
 2 (16) (17)

(16) , (15) , p
 p TFT .

, (14) C2 VL
 PLN , C3 가
 ITO (Indium Thin Oxide) (EL : 6) .

EL (20) , (6), MTDATA (4, 4 - bis (3 - methylphenylphenylamino)biphenyl)
 1 (21), TPD (4, 4, 4 - tris(3 - methylphenylphenylamino) triphenylamine) 2
 (22), (Quinacridone) Bebq2 (10 - [h])
 (23) Bebq2 (24) EM, .
 (25) , EL .

EL , (6) , (25) 가 EM
 , EM 가

, 1 TFT1 S 가 (8) , 2 TFT(4) (15) 가
 , EL , .

, 10 EL (25) ,
 (10) .

(25) DC AC 가 , (6) (25) 가 .
 (25) 가 , 가 ,
 가 .

, , EL .

, , , E
 L , ,
 , EL ,
 , ,
 , ,
 , ,
 , A1 , 가 ,
 , ,
 EL , 1 HG
 , 5 , EL , P - Si ,
 , A1
 ,
 6 , 5 A - A , 7 5 B - B
 , 1, 2 TFT1, 4 , TFT , p - Si
 (11, 15)
 5 , GL, DL (VL)
 , 5 7 EL
 , (10) , EL
 , () CAP가 EL (CAP) 1 ,
 가 , (10) , (10)
 (10)
 (8) (10) , 5 GL
 (2) (2)
 , CL GL, CL ,
 , P - Si Cr Ta , 1000 2000

Cr , 가 , 가

(7), 1
(12), 2 (16) (8) 500 Si (3) a-Si CV
D , 1300 Si 500 a-S
i가 CVD

a-Si , 400 P-Si
(13, 17) , Si (12, 16)
1 TFT(1) , 1 (13) P() , N
, 2 TFT(4) , 2 (17) B () P ,

5 , P-Si 1 TFT(1) P-Si ,
GL DL (3) DL (11)
, (2) (3) , 2 TFT(4)
(15) (30) , 2 TFT(4)
P-Si , VL 2 (15)
(6)

(14) (14) , 1000 Si ,
3000 Si , 1000 Si 3 가 CVD ,

(14) , 5 DL, VL (30)
가 , DL 1 TFT(1) (12) C1, VL
2 TFT(4) (16) C2, (30) (3) C4 ,
(30) 2 (15) C5 ,
7000 Al, Mo가 Cr , 1000 Mo,
, Mo , C3

1 $3\mu\text{m}$ PLN(1) PLN(1) , PLN(2)
1), 2 (22), (23) (24) EL , 1 (2)
, EL , 가
, 가 , 가
(6) 가 가 , 가 ,
PLN ,

(6) 2 TFT(4) 가 , PLN(1) (14) ,
2 (16) C3 .

(6) , PLN(2) . (6) PLN(2)
, EL . (6) , MTDATA (4, 4 - bis (3 -
methylphenylphenyl amino)biphenyl) 1 (21), TPD (4, 4, 4 - tris(3 - methylphen
ylphenylamino) triphenylamine) 2 (22), (Quinacridone)
Bebq2 (10 - [h] -) (23) Bebq2 (24)
EM, (Ag) , Al Li Al/LiF (25)
1000 2000 . (25) Al/LiF

(6) , 가 , (6) , .

: (6) (25) 1

: , (25) , , 2 .

: (6) 1 , ,
3 .

, (6) , .

, EL , EL . EL , ,
가 , EL
CAN

EL , (6) , (25) 가 EM
, EM , 가

1 3 HG . 가 ,
(10) . HG, , 1 (21), 2 (22), EM OR . HG
, VL , OR , (25) . 가
2 , , 1 () CAP
CLL , CLL , 1 PLN(1), 2 PL
N(2) . () CAP , TN HS .
1 PLN(1) , (25) CLL
, GL (VERTICAL DRIVER) VD가 ,
DL (HORIZONTAL DRIVER) HD가 , VD, HD , EL
VD , 4 .

TN(1) , 1 HS(1) , VL , 1 HS(1)가 , 2 TN(1) ,
 D(1), 2 WD(2) , VL , 1 HS(1)가 , 1 W
 DL . VL

TN(2) , 3 TN(2) , 2 HS(2) ,
 2 HS(2)가 , 3 WD(3) (25) 4 WD(4) ,
 .

TN(3) , 3 HS(3) , VD 4 , 2
 , TN(4) , 4 HS(4) 4 , 2 .
 4 , 1 WD(1) , , ,
 . , , ,

(25) , × , 2 HS(2) 3 WD(3) CN(1)
 TN(2) .
 , CN(1) .

2) CN(1) , TN(2) . 2 HS(
 3 WD(3), (25) CN(1) 4 WD(4)
 , TN(2) .

CN(1) (25) 4 WD(4), CN(1)
 TN(2) 3 WD(3) ,
 . , CN(1) TN(2)
 , 가 . TN(2) 3 , 2 ,
 , .

2 , A - A CN(1) . , 2 HS(2)가 ,
 TN(2) , CN(1) .

, 3 , , 가 , DL
 VL , (6), ITO .

CN(1) , 3 WD(3) , 가
 (25) . , 1 PLN(1), 2 PLN(2) ,
 , CN(1) , CN(1)
 , , Al ,
 , ITO .

I/LiF , Mo가 , Al 8000 , 2000 A
 10% , 850 ITO , ITO ,
 3 WD(3) , 가
 , 4 , 1
 , ,
 , TD 5 HS(5), OR (CN(2) HG) , (25)
 CN(2) , TD
 , CN(2) , 5 HS(5) (25)
 , 5 HS(5) , 2 HS(2) (25) TN(2) ,
 가 , 5 HS(5) , 1 WD(1), 3 WD(3)
 , , 가
 ,
 (25) CN(2) (3) , 2 3 , ,
 (100)
 DL VL , 5 HS
 (5) , DL VL Al , 3
 , 4 , CN(2) , 2 PLN(2) (100)
 5 , (100)가 5 HS(5) (100) , 5 HS(
 2 PLN(2) ,
 , , 2
 ,
 11 , B - B 12 5 5 A - A
 2
 , IL , 500 Si , 1000 Si
 , Si ,
 , 1 TFT101 (112), (112) (8) , 2 TF
 T(104) 2 (116) (P - Si a - Si)

GL, (107), (111), (111)
 (108), (108)
 (108), 1 (2), CL
 . Al, (114) CVD Al
 .

N TFT가, (가 P
 (102) 가 .).
 1 (111) 가, ,

(114), DL, VL, 1, PLN(1)
 (106), (106) 2 TFT(104), C3, V
 L SE가, (106)
 PLN(1) (106), 2, PLN(2), (106) 1
 2, PLN(2), (106)

EL (20), 가, (111, 115)
 1), CN(2), 2, 3, 가 가, HS 가, CN(
 , p - Si, TFT

, EL
 EL 가, ,

, Al, Al, ,
 가, ,

, 가, EL EL
 , EL

(57)

1.

EL, EL, EL

EL ,
.

2.

EL , EL ,

EL ,

3.

EL , EL

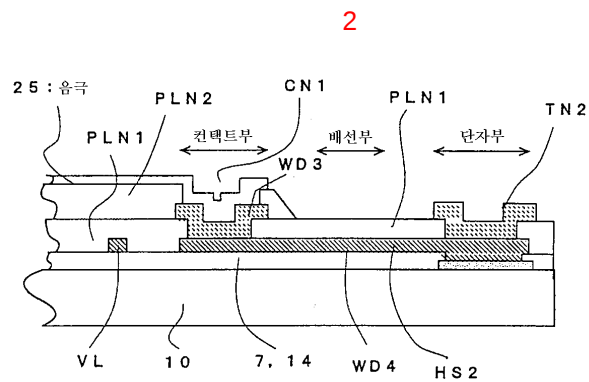
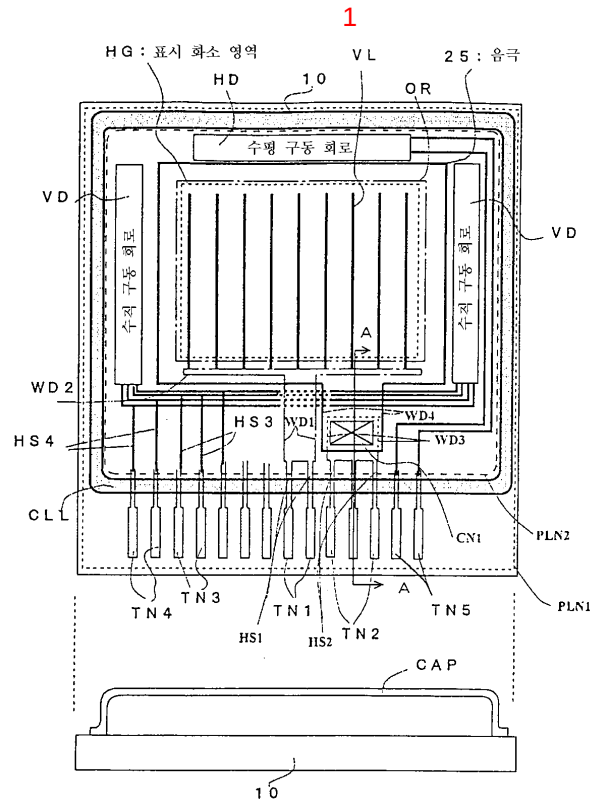
EL , EL

4.

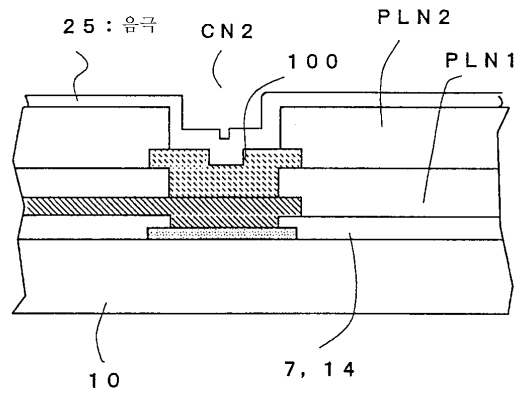
1 3 ,

EL ,

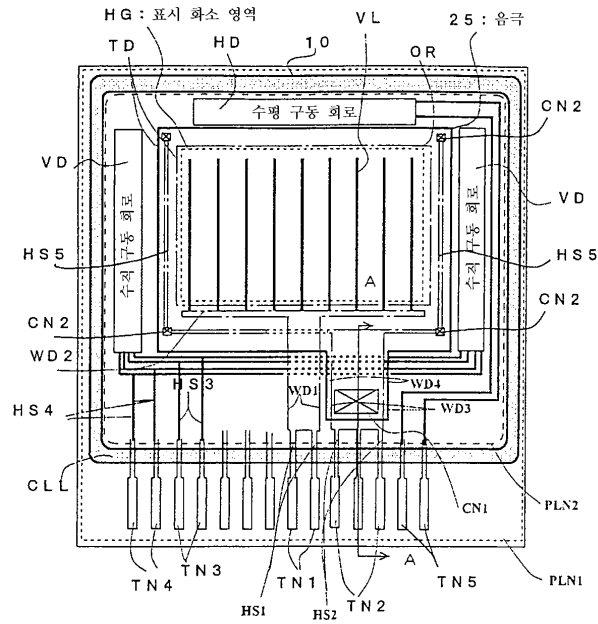
EL .



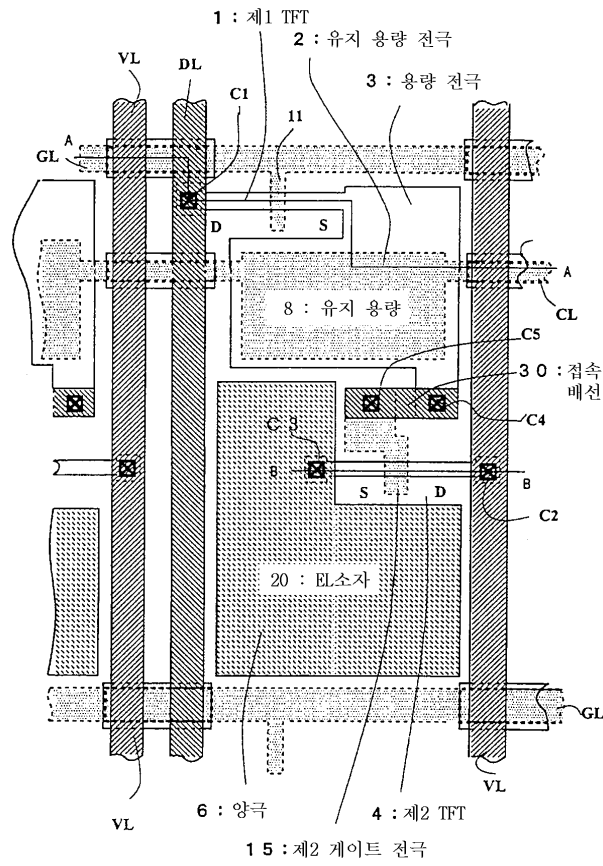
3



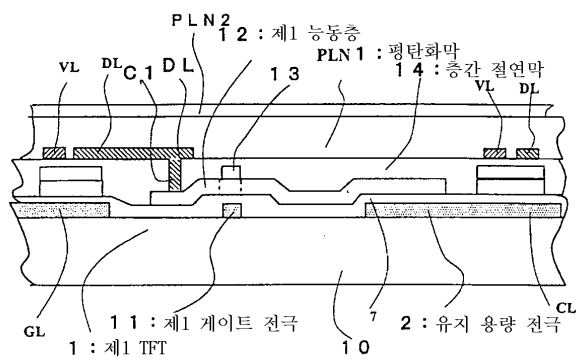
4



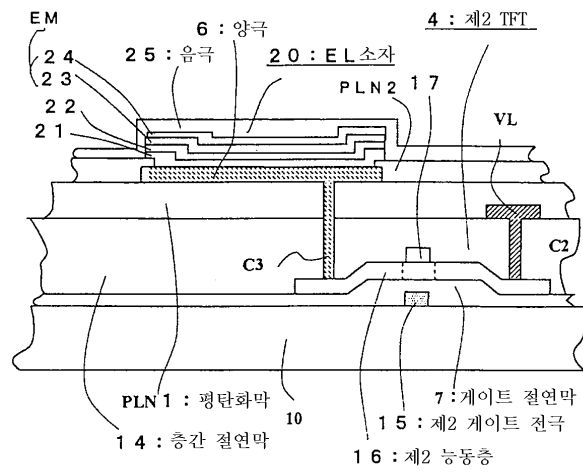
5



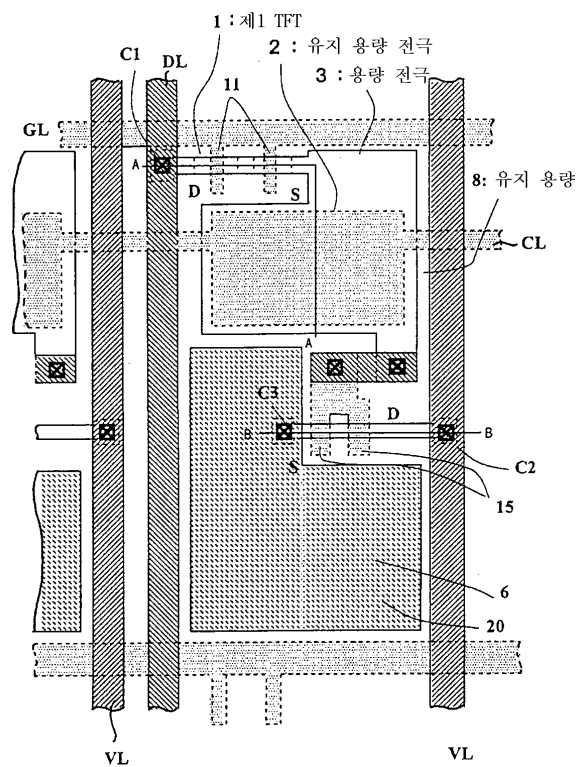
6



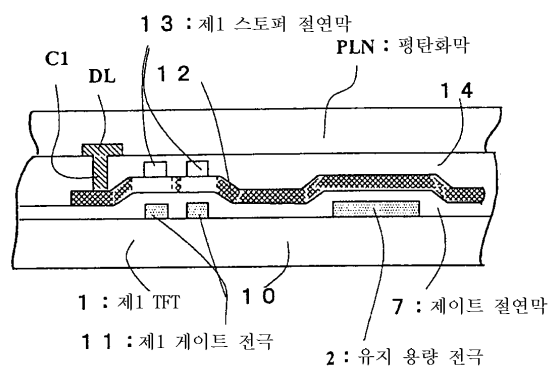
7



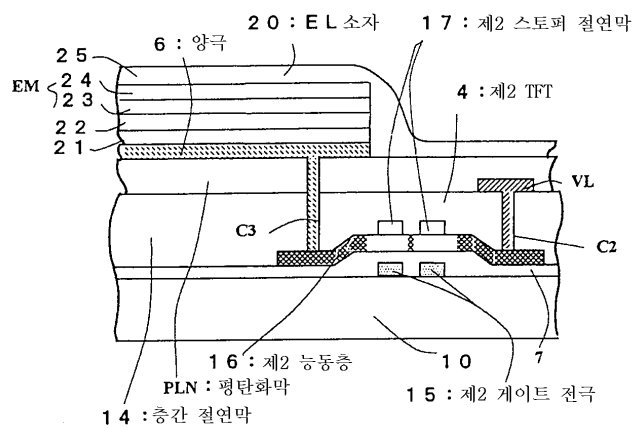
8



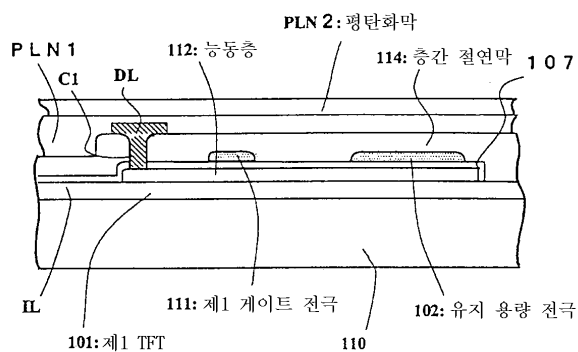
9



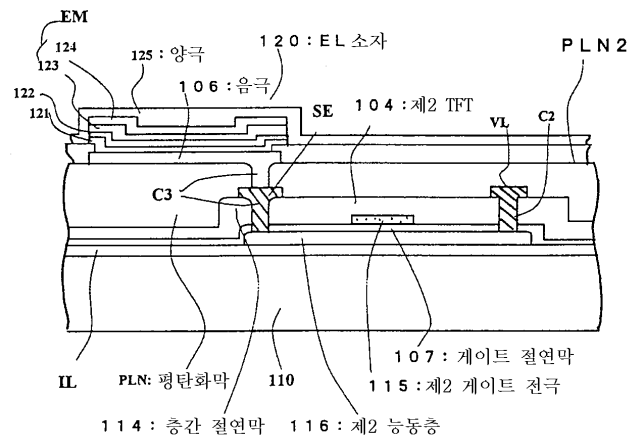
10



11



12



专利名称(译)	EL显示器件		
公开(公告)号	KR100358315B1	公开(公告)日	2002-10-25
申请号	KR1020000057597	申请日	2000-09-30
[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	OKUYAMA MASAHIRO 오꾸야마마사히로 KOMIYA NAOAKI 고미야나오아끼		
发明人	오꾸야마마사히로 고미야나오아끼		
IPC分类号	H05B33/26		
代理人(译)	CHANG, SOO KIL CHU, 晟敏		
优先权	1999281792 1999-10-01 JP		
其他公开文献	KR1020010050782A		

摘要(译)

从而防止施加到阴极的电压降低并防止显示质量的劣化。宽部分WD4设置在阴极25上，宽部分WD3设置在从阴极端子TN2延伸的配线HS2上。并且在其上形成具有大尺寸的触点CN1。此外，在该接触CN1处，它通过由氧化物制成的导电材料100连接到阴极25。2 指数方面 EL元件，触点，阴极，存储电容器，层间绝缘膜

