

2 , 3

3 , 3

4a 4d , , 3

5 , 3

가

< >

10: , 11: , 12: , 14: , 15: 1 , 16: , 18: 2 , 22: , 24: , 26: , 28: , 30: , 32: , 51: , 52: , 130: 1 TFT, 140: 2 TFT

(, ' EL ') (Thin Film Transist or: TFT) EL

EL EL 가

가 , 가

가 3 , ,

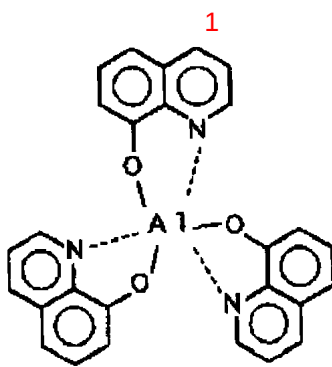
1 1 가 , (, ' EL ') EL 3 Rpix, Gpix, Bpix가

1 (51) (52) EL 2 TFT가 , 1 TFT (130)가, (Indium Tin Oxide: IT0) (12)가 EL 가

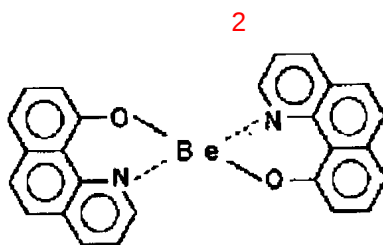
2 , 3 1 EL Rpix, Gpix Bpix (10) (12), (14), (16) (22), (24) (26) (16)

, 3 (28), (30) (32)
 , EL (22), (24) EL (26)
 , EL 가
 , EL 가
 가 EL
 EL 1 1 EL
 1 2 , 2
 , 1 1
 , 1
 , 2
 EL 가
 가 1
 가 ,
 2
 EL 1 EL
 1 EL 가
 , 1 2
 , 2
 , 2
 가 EL 가 가 , 2
 가 , 2

, (Be), (Mg), (Zn) 2, 3, 2 (Al), (Ga), (In) 3, 1, Alq3 BeBq2 (Alq3) 2 (BeBq2) , Alq3 가 Alq3 , 1 Alq 3 , EL



A 1 q 3



B e B q 2

, Alq3 , 2, 2 , 1 EL , 1 2 , 1

가 .

가

3
(10)

EL

(12),

EL

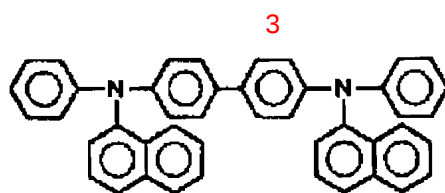
(14)

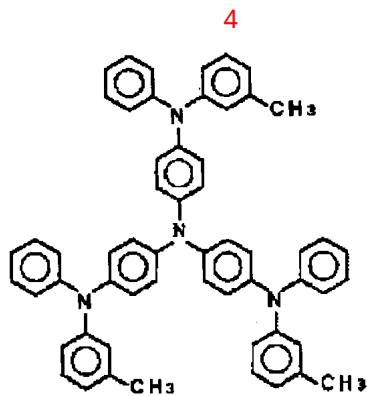
(16)

(12), ITO (SnO₂) (In₂O₃)
ITO가 (16)

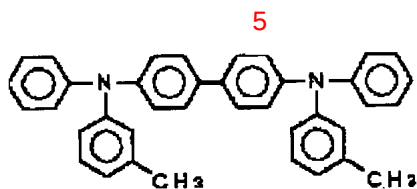
-1-)-N,N'- - , 4 4,4',4'- (3-) 3 N,N'- ((MTD

ATA) 5 N,N'- -N,N'- (3-)-1,1'- -4,4'-





MTDATA



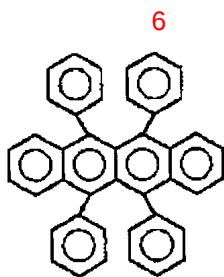
6) , , (22), (24) (26) (1

(22) (24) Alq3 BeBq2 , 6

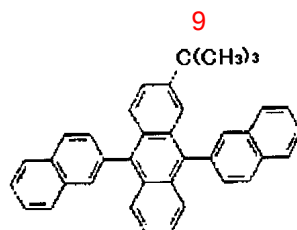
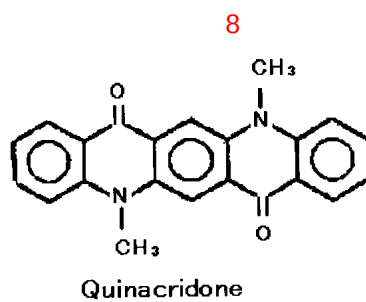
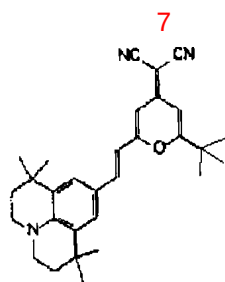
2002-38140 가 가 . , 7 8

770 9 tert- (26) 2002-25

가 . 2002-25770 tert- (TBP)



Rubrene



(26) (28) (28) , Alq3
 (28) , Alq3가 (28) 3가
 , 가 .
 (22) (24) Alq3 (28)
 (26) (26) (28) (28) .
 (26) (28), (22) (24) (3
 0) (32)가 (MgIn), (MgAg) (32) , Li
 (AlLi) (MgIn), (MgAg) 2 ,
 (32) .
 1 (22),
 (24) (26) (28) 1 (22),
 (28) (26) (22) (24) (28)
 (28) (22) (24) (26)

4a 4b EL TFT

4a (16) (10) (12), (14) (2)

가 4c (16) (16) (24)

(22) 4d (16) (24)

(26) (22) (24) 1/2 (24)

(28) (26) (28) (22) (24)

(22), (24), (28) (30) (

32) 3 (22), (24)

(26) (28) 3

< >

L 5 1 A-A EL E

(10) (11) (11) EL 2 TFT (1

40) (12) (13), 1 (15) EL ITO 가 TFT

(18) 2 (18) (12) (18) 2 TFT (140)

(18) (12) (18) (12)

(22), (12) 2 (18) (14)

(24), (26)

(22) Alq3 2 % 7 10 %

(24) Alq3 1 % 10 % 8

(26) 8 2 % TBP (22)

(24) 75 nm (26) 37.5 nm (26)

(28) 37.5 nm

0) 1 nm (28), (22) (24) (32) (3

()

(22) (24) 37.5 nm 1 EL (28) 37.5

nm

[1]

	(cd/A)	()	(cd/m ²)
()	5.9	2000	800
()	6.0	3000	800
()	2.1	1000	500
()	2.3	1500	500

1.5 EL 5.9 cd/A 6.0 cd/A 2000 3000
EL 2.1 cd/A 800 cd/m² 1000 1500 1.
5 2.3 cd/A 500 cd/m² 가
EL
(22) (22) (24) (24) (26) (28)
EL (22) (24) 가
(24) EL (26) (28) 3 EL (22),
3 EL
EL EL EL
가
(57)
1. 1 1
1 2
2
2.
1 1 2
3.
1 2 3
4.
3 가 ()

1	5.	,			
1	6.	,	2		.
2	7.	,	2		.
3	8.	,	2		.
4	9.	,	2		.
5	10.	,	2		.
1	11.	,	1	,	2
2	12.	,	1	,	2
3	13.	,	1	,	2
4	14.	,	1	,	2
5	15.	,	1	,	2
6	16.	,	1	,	2
7	17.	,	1	,	2
8	18.	,	1	,	2
	19.				

9, 1, 2

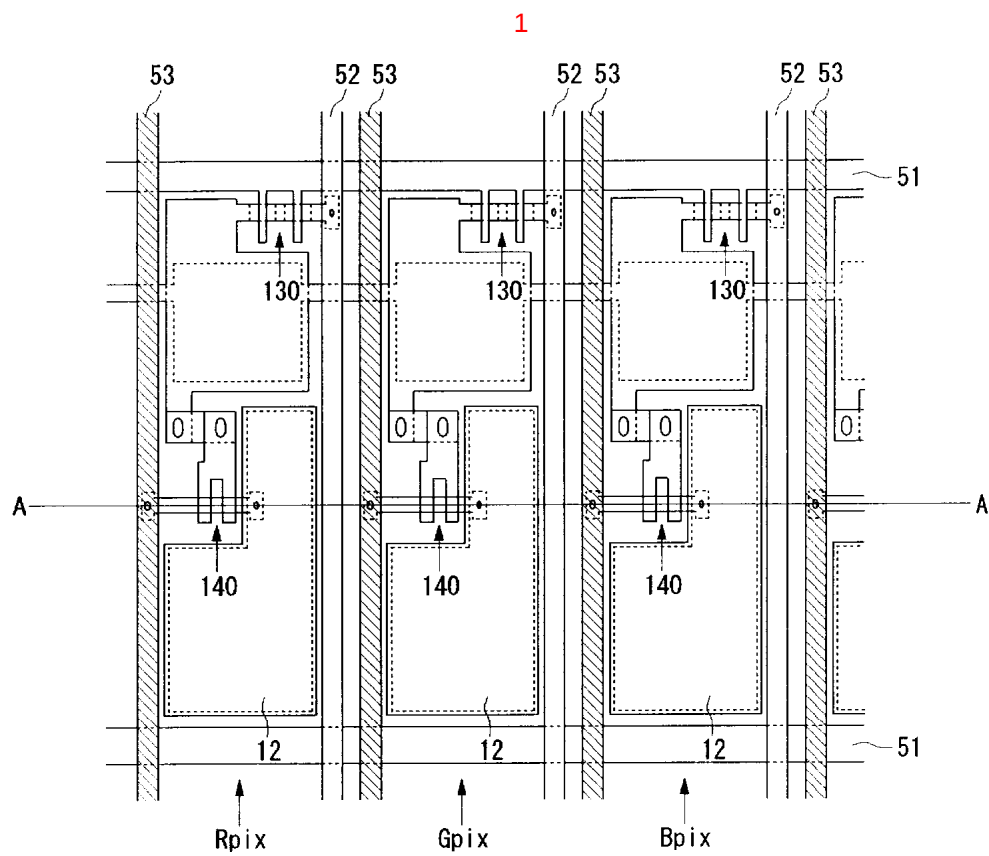
20. $10^1, 1^2, 2^{10}$

21.

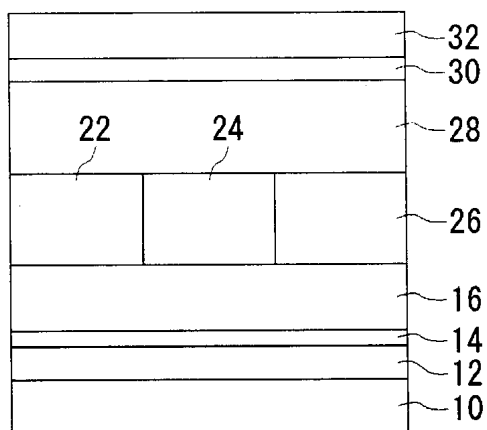
1

2

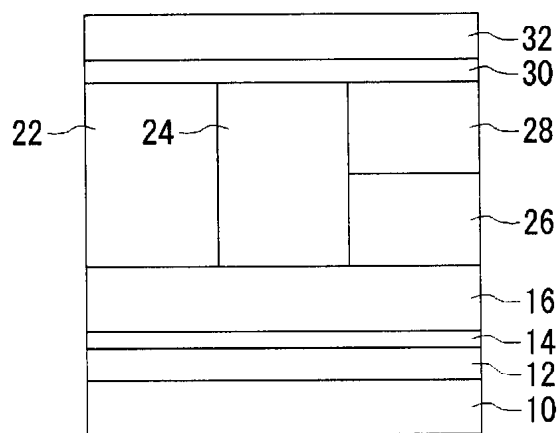
1



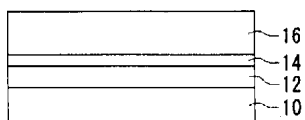
2



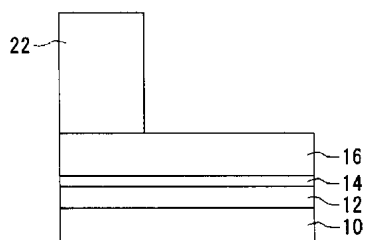
3



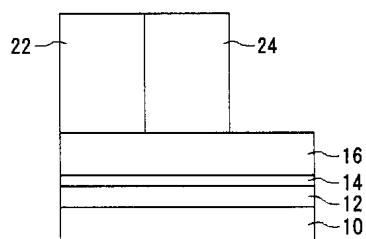
4a

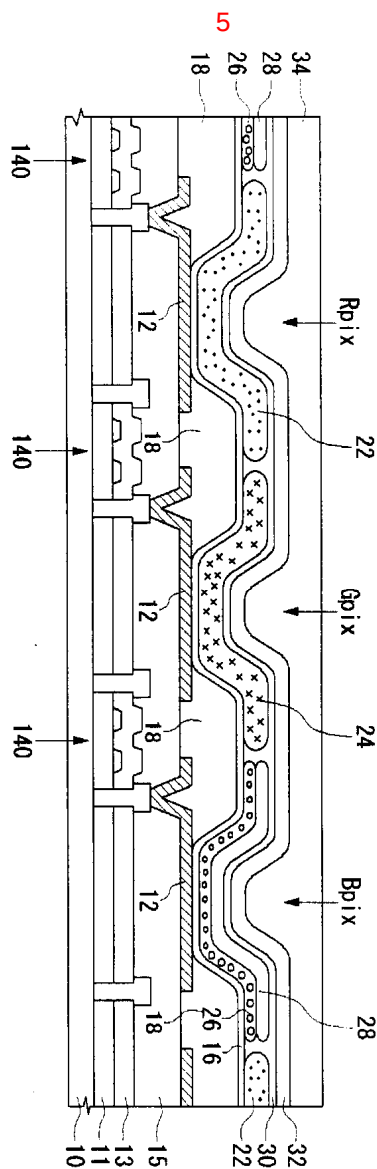
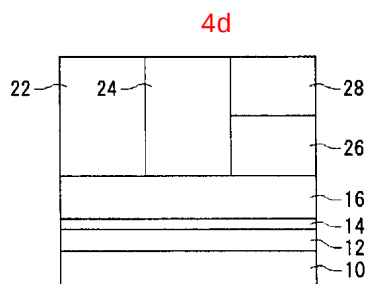


4b



4c





专利名称(译)	有机电致发光显示装置及其制造方法		
公开(公告)号	KR1020030074225A	公开(公告)日	2003-09-19
申请号	KR1020030013669	申请日	2003-03-05
[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	HAMADA YUJI 하마다유지 NISHIMURA KAZUKI 니시무라가즈끼		
发明人	하마다,유지 니시무라,가즈끼		
IPC分类号	H01L27/32 H01L51/50 H01L51/30 H05B33/20 H05B33/10 H01L51/00		
CPC分类号	H01L51/5012 H01L51/0059 H01L27/3211 H01L51/0062 H01L51/0077 H01L51/0052 H01L51/0081		
代理人(译)	CHANG, SOO KIL CHU, 晟敏		
优先权	2002059536 2002-03-05 JP		
外部链接	Espacenet		

摘要(译)

本发明涉及有机电致发光显示器，其中通过在与空穴传输层和发光层以及发光层和电子传输层的间隔的间隔中产生的界面分解有机电致发光器件。在每个有机电致发光器件中，红色发光层，绿色发光层和蓝色发光层形成在空穴传输层上。此外，电子传输层形成成为蓝色发光层。此外，红色发光层和绿色发光层的厚度与电子传输层和蓝色发光层的总厚度相同。空穴传输层，发光层，有机电致发光显示器a，电子传输层。

