

(19) (KR)
(12) (B1)

(51) 。 Int. Cl. ⁷ (45) 2003 02 05
H05B 33/10 (11) 10 - 0369575
(24) 2003 01 13

(21) 10 - 2002 - 0014622 (65) 2002 - 0081055
(22) 2002 03 18 (43) 2002 10 26

(30) 1020010020689 2001 04 18 (KR)
(73) 76 - 41, 123 1 715
(72) 2 257 - 290
326 가 1205 508
206 - 17 1

:

(54)

가

1

1

2

1b

1 1

2 2

3 3

4

,

가

.

,

,

가 가

,

,

, 가 ,

,

가

,

,

(Cathode Ray Tube)

(Flat Panel Display)

가

.

,

(Liquid Crystal Display),

(Ele

ctroluminescence Display),

(Plasma Display Panel),

(Field Emission D

isplay),

(Vacuum Fluorescence Display)

(Light Emitting Display)

.

,

가

,

, 가

가

,

가

(Back light),

,

(

CNS, Car Navigation System),

,

TV

가

.

(Organic Electrolum

inescent Display,

'OELED' .)

(Inorganic Electroluminescent Display)

가

,

,

,

,

,

.

4

.

4

,

(11)

(Anode layer)(12),

(Ho

le injection layer)(13),

(Hole transport layer)(14),

(Organic emitting layer)(15),

(Electron transport layer)(17)

(Cathode layer)(18)

,

(15)

.

(13),

(14),

(1

7) (Organic electroluminescent display) 가

(13), (14), (15), (17)

가

370mm X 470mm 400mm X 400mm

(15) U.S. Patent No. 4,76
 9,292 5,294,870 (8 -) (Aluminum tris(8 - hydroxyqu
 inoline), Alq3), (Perylene) (Fluorescent Emitting Material)
 U.S. Patent No. 6,097,147 2,3,7,8,12,12,17,18 - - 21H,23H -
 (Platinum 2,3,7,8,12,12,17,18 - octaethyl - 21H,23H - porphine platinum, PtOEP), (Iridiu
 m complex,ex)Ir(PPy)3) (Phosphorescent Emitting Material) (14)
 (16) (Bathocuproine, BCP), (Carbazole biphenyl, CBP), N,N' - -
 N,N' - - - (N,N' - diphenyl - N,N' - bis - alpha - naphthylbenzidine, NPD) (18)
 Blocking layer) OLED 가 , OLED (12) (18)
 (14) (15) 2 가 , U.S. Patent No.5,399,
 502 5,807,627 (Conjugated polymer) (Pol
 y(p - phenylenevinylene),PPV), (Poly(thiophene)), (Poly(2,5 - dialkoxyp
 henylenevinylene), PDMeOPV)

가

1

[1]

유기 전계발광 물질	방출광의 파장
4,4-비스(2,2'-디페닐에텐-4-닐)-다이페닐 (4,4-Bis(2,2'-diphenylethen-4-yl)-diphenyl)	465nm
트리스(8-히드록시퀴놀린)알루미늄 (Tris(8-hydroxyquinoline)aluminum)	520nm
비스(8-히드록시퀴놀린)마그네슘 (Bis(8-hydroxyquinoline)magnesium)	515nm
쿠마린 6 (Coumarine 6)	503nm
루브렌 (Rubrene)	560nm
폴리페닐렌비닐렌 (Poly(p-phenylenevinylene), PPV)	540nm

(Active Type) (Passive Type)
 , (Panel) 가 가 ,
 , 10"
 ,
 가 - (Poly - Si Thin Film Transistor)
 가 .

가 .

가
 370mm X 470mm 400mm X 400mm .

가
 가가 가 .

가 .

- (1) 1 ;
 ; 2 1
- (2) (1) ITO ; ITO 가 ,
 ; ITO
- (3) (1) 740mm X 940mm
 , 370mm X 470mm .
- (4) (1) (laser), ,
- (5) (1) ,
- (6) (1) 1 , 2 ,
 2 , 1 , 2
- (7) (1) , 1 1

- (8) (1) , , , , .
- (9) (1) , 2 .
- (10) 1 가 ; 1 ; 2 .
- (11) (10) , 50 μ m 1 mm 가 .
- (12) (10) , , .
- (13) (10) ; ; 2 (Contact Hole) 1 ; .
- (14) (10) 2 , 1 , 2 , .
- (15) (10) , , , .
- (16) (10) , 2 .
- 1 .
- 1a 1b 1
- 1a , 740mm X 940mm (100) ITO(Indium tin oxide) () . ITO (Photo Resist) (Coating) (De veloping) , ITO (Etching) (stripe) (200) . (710) (210)가 . (710) (200) (710) .

(710)
(200) (710) (720)

(200), (710), (720) (100)
(scribing lane)() 50 μ m 1 mm

740mm X 940mm (100) 370mm X 470mm 4
(100') (100) (laser), UV
(100) (Particle)

1b , 370mm X 470mm (100') (210) (200)
(Shadow Mask) CuPC, m - MTDATA (310)
(310) NPB (320)

(320) Alq₃ + DCJTb , Alq₃ + Qd2
(400) Blq + Perylene (400)
(400) Alq₃ (330)

(330) (Electron Injection Layer)(340) , Al
(500) 가 (50
0)

1 (200) (500) (200)

2

2a 2b 2 (2b 2a a - a'
2a 2b

2a , 740mm X 940mm (100)
(100) (Sputtering) (Cr), (W), (Mo), (MoW),
(Al), (600)
(600) (200)

(600) (100) ITO , ITO (600) (200)
(200) (600) ITO

1 (200) (100) (710) (720)
 , (100) (scribing lane)()
 50 μ m 1 mm .

740mm X 940mm (100) 370mm X 470mm 4
 (100') (100) (laser), ,
 (100) (Particle) , UV

1 370mm X 470mm (100') (310), (320),
 (400), (330), (340) , , (En
 (500) ,
 capsulation) (Passivation layer) .

2 , (100) (200) (200) (600)

1 2 가 가 ,
 가

1 2 740mm X 940mm 370mm X 470mm

1 2 740mm X 940mm ,
 370mm X 470mm , 4
 가 4

3

3a 3b 3

(100) (SiO₂) ()
 (810) (Sputtering) (Chemical vapor depos
 ition) (810) (laser annealing)

(810) (Island) (810)
 (820) (820)
 (830) , (

830) (810) (820)

(810) (source) (drain) ()
 2 (840) (820) (830)
 (100) 2 (840) (820)
 (Contact Hole)

0) ,
 ilm transistor)

(Driving thin film transistor)
 ITO (200)
 (900) (Signal line)
 (Capacitor) (Storage electrode)

ITO (200)

, ITO (200) (710)

(100) (100) (810), (820), (830)
 (scribing lane)() 50 μm

740mm X 940mm (100) 370mm X 470mm 4
 (100') (100) (laser),
 (100) (Particle)

UV

1 2 370mm X 470mm (100') ITO (200)
 (310), (320), (400), (330), (340)

(340) (500) (Passivation layer)

3b 가

3 740mm X 940mm 370mm X 470mm

3 740mm X 940mm
 370mm X 470mm

4 , 4

ITO (200) (500) (200)

3
 (Pixel) 가 , 가

가

가

가

가

, 가

.

.

,

, , 가 가 ,

(57)

1.

1 ;

;

1 ;

2

.

2.

1 , ,

1 ITO ;

ITO 가 ;

ITO

.

3.

1 , 740mm X 940mm , 37
0mm X 470mm

4.

1 , (laser), ,

.

5.

1 ,

.

6.

1, 1, 2, 1.

7.

$$1 \quad , \quad 1 \quad 1$$

8.

9.

1, 2.

10.

11.

10 , , 50 μ m 1 mm
가 .

12.

13.

;

;

2 ;

2 (Con

tact Hole) ;

1

;

14.

10 , 1 , 2 , 2 ,

1 , 2

.

15.

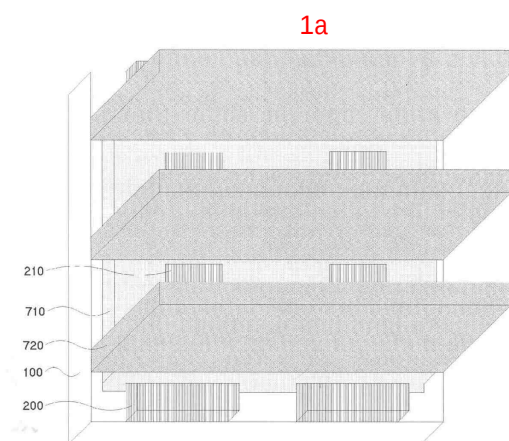
10 , , , , ,

.

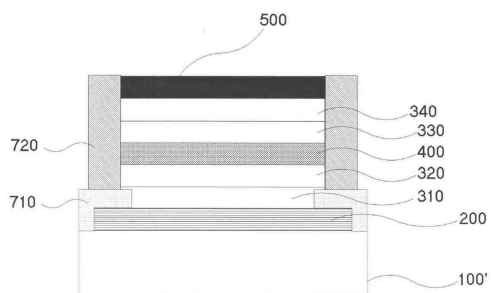
16.

10 , 2

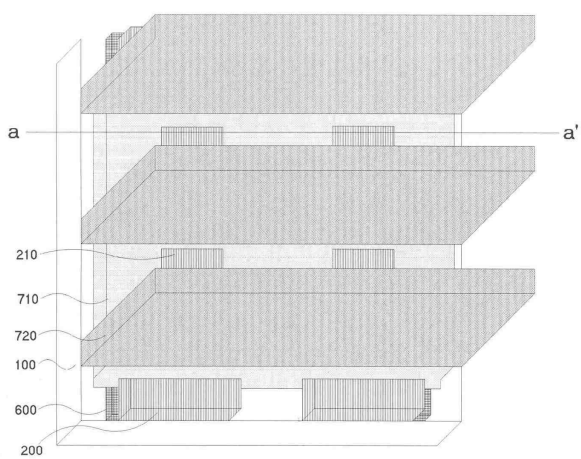
.



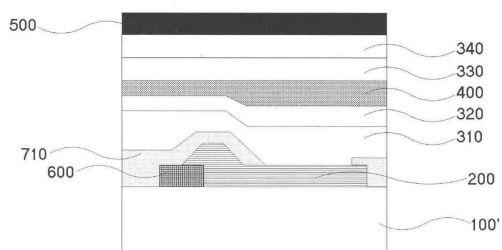
1b



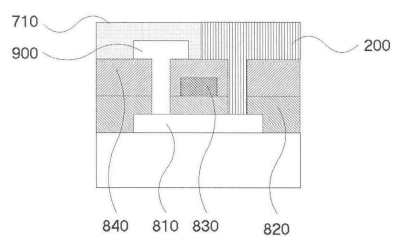
2a



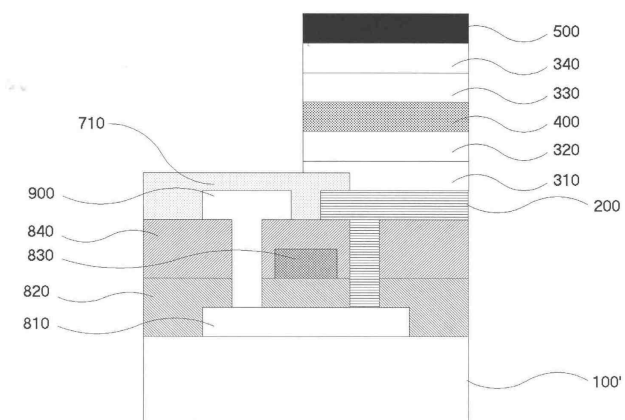
2b



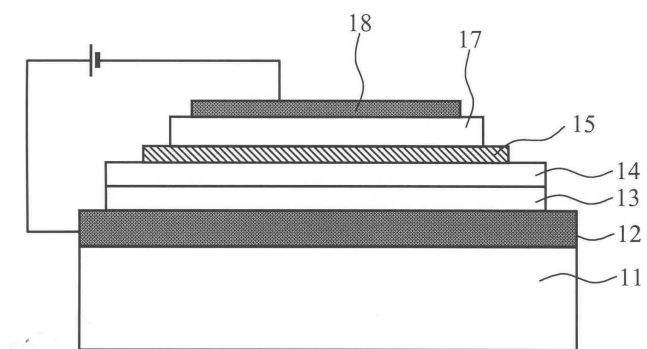
3a



3b



4



专利名称(译)	制造有机电致发光显示装置的方法		
公开(公告)号	KR100369575B1	公开(公告)日	2003-02-05
申请号	KR1020020014622	申请日	2002-03-18
[标]申请(专利权)人(译)	大宇电子服务股份有限公司		
申请(专利权)人(译)	cl数码有限公司		
当前申请(专利权)人(译)	cl数码有限公司		
[标]发明人	YI SEUNGJUN 이승준 CHOI DOHYUN 최도현 CHOI KYUNGHEE 최경희		
发明人	이승준 최도현 최경희		
IPC分类号	H05B33/10		
CPC分类号	H01L21/02076 H01L51/56 H01L2251/566		
优先权	1020010020689 2001-04-18 KR		
其他公开文献	KR1020020081055A		
外部链接	Espacenet		

摘要(译)

本发明涉及有机电致发光显示装置的制造方法，该有机电致发光显示装置在大型基板上分割大型基板后制造多个有机电致发光显示装置，并进行有机电致发光装置的后处理，提高生产效率。。并且它包括在所制备的步骤的第一电极层和小基板上形成有机电致发光层的步骤和在有机电致发光层上形成第二电极层的步骤，在大基板上形成第一电极层的步骤和多个步骤小基板分割大基板。有机电致发光显示装置，大基板，小基板，切割，有源型，无源型。

