

(19)
(12)(KR)
(A)(51) 。 Int. Cl. ⁷
H05B 33/00(11)
(43)2002 - 0042416
2002 06 05(21) 10 - 2001 - 0069888
(22) 2001 11 09

(30) 1020000071445 2000 11 29 (KR)

(71)

76 - 41, 123 1 715

(72)

326 가 1205 508

462 415 1101

2 257 - 290

:

(54)

, , 1 ,
 1 , 가
 , 2 1
 2 ,
 , 가 ,

1				OELD		.
2					OELD	.
3					OELD	.
4		PDP		,		.
5	4	A - A'	B - B'		PDP	.
6		1		PSOELD		.
7	6	A - A'	B - B'		1	PSOELD .
8a		PSOELD			가	.
8b		PSOELD			가	.
9		2		PSOELD		
10	9	A - A'	B - B'		2	PSOELD .
11		3		PSOELD		
12	11	A - A'	B - B'		3	PSOELD .

11, 21, 31,41,51, 71,91:

12,22,32,58,78,98:

13,24,34:

14, 25, 35, 62, 82,102:

15, 27, 38, 63,83,103:

23, 33:

26, 37:

36:

42, 52,72,92:

43, 53, 73,93:

43A:

43B:

44, 57,77,97:

45:

46:

47, 54, 74,94:

48:

49:

50, 56, 76,96:

55,75,95:

59, 79,99:

60, 80,100:

61:

64:

85,105:

(Plasma Switched Organic Electroluminescent Display, ' PSOELD')

가 가 ,
가 ,
(Cathode Ray Tube: CRT) (Flat Panel Display: FPD) 가
(Liquid Crystal Display: LCD),
Electroluminescence Display: ELD), (Plasma Display Panel: PDP),
(Field Emission Display: FED), (Vacuum Fluorescence Display: VFD) (Light Em
itting Display: LED)

	(ELD) ,	가	, TV 가 (back light),	가	,
(CNS, Car Navigation System),	(ELD) ,				(Organic Electroluminescent Display, 'OELED')
					(Inorganic Electroluminescent Display)
		가			
	OELD			OELD OELD	OELD
1	OELD		OELD		
1	(anode layer, 12), (cathode layer, 15)	(11) (hole transport layer, 13), 가 .	ITO(indium tin oxide) 	IZO(indium zinc oxide) (emitting layer, 14)	
	(14) (Conjugated polymer poly(thiophene)) ,	5,399,502 (Poly(p - phenylene - vinylene) , PPV) , (Poly(2,5 - dialkoxy - phenylenevinylene), PDMeOPV)	5,807,627 (P		
2			OELD		
2	(anode layer, 22), (emitting layer, 25), 27)	(21) (hole injection layer, 23), (electron transport layer, 26),	ITO(indium tin oxide) 	IZO(indium zinc oxide) (hole transport layer, 24), (cathode layer,	
	(23), (25) (8 -)	(24) (Aluminum tris (8 - hydroxyquinoline) , Alq3) ,	(26) OELD 4,769,292	가 5,294,870 (Perylene)	.
3			OELD		
3	(anode layer, 32), (emitting layer, 35), (cathode layer, 38)	(31) (hole injection layer, 33), (hole blocking laer, 36),	ITO(indium tin oxide) 	IZO(indium zinc oxide) (hole transport layer, 34), (electron transport layer, 37),	
	(33), . 7,18 -	(34), (35) - 21H,23H -	(36) (Platinum complex, ex)Ir(PPy)3	(37) OELD 6,090,149	가 2,3,7,8,12,12,1
- Iridium, P EP),					(Phosphorscent emitting m

aterial) (Bathocuproine, BCP), (Carbazole biphenyl, CBP), N,N' -
 - N , N' - - (N , N' - d i p h e n y l - N,N' - bis - alpha - naph - y
 lbenzidine, NPD) .

OELD (active type) (passive type) . OELD
 , (panel) 가 가 ,

poly - Si thin film transistor, 'Poly Si TFT') 10 , - (
 , Poly Si TFT , (device) ,

Panel, 'PDP') (Plasma Display
 (display) 42 , PDP OELD Poly Si TFT
 (large size)

4 PDP , 5,420,602 , 5,661,500
 5,674,553 PDP 3 PDP .

5 4 A - A ' B - B ' PDP , 4 , 가 PDP
 90 .

4 5 , (Glass) (41) ,
 (42) .

(41) (42) 2 (X, Y)
 (47) , (47)
 (48) (47) (48) (ac
 tive area) (49) , (49)
 2 가 MgO
 (50) .

(42) (47) (4)
 (43) (43) (47)
 4) , (44) (44) (46)
 (45) , (43)
 (45) 가 (46)
 He, Ne, Ar, Xe, Kr, Rn (Noble gas) Hg
 , Ne - Xe Ne - Xe - Ar 가 .

PDP .

(data) (total white and erase period),
 (address period),
 (sustain period) .

(wall charge) PDP ,

가 2 X Y 150V ~ 300V
 가 .
 가 X Y
 가 (Voltage)

가 ,
 Y 가 가 가
 가 가 가
 가 가
 X Y 가 , 가
 (gray scale of cell)가

3 PDP (Vacuum UV) ms
 , 3 lm/W , 180V IC 가가

가 , ~ ns 160V

가 , PDP OELD ,
 IC , 가 , PSOELD

가 1
 1 , 1
 가 2 , 2
 1 2

1 , 1

1 1

(floating)

1 1

1 1

2 2

가 2

MgO

ITO IZO

가

(screen print), (inkjet print),
(Dry film laminate), (shadow mask)

1 1

1 1

2

2

가

2

가

(screen print), (inkjet print),
(Dry film laminate), (shadow mask)

1

1

2

2

2

가

2

가

(screen print), (inkjet print),
(Dry film laminate)

MgO

1

1

1

2

2

2
가

2

MgO

ITO IZO

가

(screen print),
(shadow mask)

(inkjet print),

(Dry film laminate),

2

6

1
1

PSOELD
PSOELD

7

6

A - A'

B - B'

6
7
90

6 A - A' 1 B - B' PSOELD PSOELD

6 7 , PSOELD (110) (120)

(120) (52), (54), (55), (53) (56)

(51) (52) ~ um um (photolithography)

2 (stripe) (54)

(54) (52) (55)

~ um

(55) (54) um (53) 2 10

um

deposition) (53) 가 2 (55) 가 MgO um ~ um (55) (vacuum

(56)

(110) (51), (57), (58), (59), (60),

(61), (62) (63)

(120) (51) (120) (54)

(stripe) (photolithography)

(57)

(57) (51) ITO(Indium tin oxide) IZO(Indium zinc oxid

e) (58) (57)

(57) (58) (51) (59)

(contrast ratio)

(120) (59) (58)

(57) (through hole) (60)

(61)

(60) (58) (58) (63) (58) 가

(short) (53) (through hole) (57)

(61) (60) (60) (through hole)

(59) (60) (61)

(photolithography) (60) (61)

(53) 1 .

(60) (59) (60)

(62)

(62)

(63)

(62)

(60) (61) (53)

(54) (110) (120)가 (align)

n), (53) Ne - Xe Ne - Xe - Ar 가 N

e(96%) - Xe(4%) 가 500 torr 가 .

(62)

(58) (62)

(62) (vacuum depositio

n) (62) (58) (62)

(62) (63)

(62)

(58) (62) (62)

(63)

8a PSOELD 가 8b

PSOELD 가

8a 8b PSOELD 90

8a 8b (62) (58) (63) 가

(64) (63), (57), (56) (53)

PSOELD 3

(64) 8A 가 V1 가

(turn - on) V2 (63) (57)

(56) 가 V1

(64) 가 (63)

(57) (turn - off) (62)

(64) (62)

9 2 PSOELD , 10 9 A - A' B - B'

2 PSOELD .

9 2 PSOELD ,

10 9 A - A' B - B' 90 .

9 10 , 2 PSOELD (130) (140) .

(140) (72), (74), (75), (73), (76) (85)

(71) (72) ~ um um 가

2 (stripe) (74) (photolithography)

(74) (75) ~ um

(75) , 2 (74) 10

um (73)

가 (73) 2 가 MgO um ~ um (vacuum deposition)

(76) .

2 (74) (76) (74)

(85) (Shadow Mask)

9 (130) (71), (77), (78), (79), (80),

(82) (83) .

(71) (77) (140) (74)

(stripe) (photolithography) .

(77) (71) ITO(Indium tin oxide) IZO(Indium zinc oxide)

(78) (77)

(77) (78) (71)

(79) (contrast ratio)

가 (140) (79) (through hole)

(80)

(80) (78) (78) (83)

(short) (73) (78) 가
 (through hole) (7)
 9) (80) (photolithography) , (8
 0) (73) 1 .
 (80) (79) (80)
 (82) .
 , (82)
 (83) .
 , (82)
 .
 (80) (73) (74)
 , (130) (140)가 (align), (73)
 Ne - Xe Ne - Xe - Ar 가 , Ne(96%) - Xe(4%) 가 500 torr
 .
 (82)
 (78) , (82)
 .
 , (82) (vacuum depositio
 n) , (78) (82) ,
 (82) (83) .
 , (82)
 (78) (82) , (82)
 (83) .
 11 3 PSOELD , 12 11 A - A' B - B'
 3 PSOELD .
 11 3 PSOELD
 , 12 11 A - A' B - B' 90
 .
 11 12 , 3 PSOELD (150) (160) .
 (160) (92), (94), (95), (93) (96) .
 (91) (92) , ~ um um
 2 (stripe) (94)
 (photolithography) .
 (94) (92) ~ um
 (95) .

(95)
(94) 10² um

(93)

(93) (95) (95)
가 2 가 MgO um ~ um (vacuum depositi
on) (96)

(150) (91), (97), (98), (99), (10
0), (102), (103) (105)

(91) (160) (94) (stripe)
(photolithography) (97)

(105)

(97) (105) ITO(Indium tin oxide) IZO
(Indium zinc oxide) (98) (97)
(105) (91)

(97) , (105) (98) (91) ,
(contrast ratio)
(99)

(160) (99) (98)
(through hole) (100)

(100) , (98) (98) (103)
(short) , (93) ()
(98) 가 (through hole)
(99) (100) (photolithograp
hy) (100) (93) 1

(100) (99) (100)
(102)

(102)

(103)

(102)

(100), (105) (97) (93)
(94) Ne - Xe Ne - Xe - Ar 가 (150) (160)가
(align), (93) 500torr 가 Ne(9
6%) - Xe(4%) 가

(102)
 (98) , (102)
 .
 , (102) (vacuum depositi
 on) , (98) (102)
 (102) (103) .
 , (102)
 (98) (102) , (102)
 (103) .

PSOELD , ,
 , 가 ,
 가
 , PSOELD (TFT) ,
 가
 가 , 가

- (57)
1.
 , , ,
 1 1
 ,
 가 ,
 2 2 ,
 1
 .
 2.
 1 ,
 1
 1
 .
 - 3.

2 ,

1

1

.

4.

1 ,

(floating)

.

5.

1 ,

,

,

.

6.

1 ,

1

,

1

,

,

2 ,

2

,

2

,

가

2

,

,

.

7.

6 ,

MgO

8.

6

ITO IZO

9.

6

가

10.

6

film laminate), (screen print), (inkjet print), (Dry
(shadow mask)

11.

6

12.

1

1

1

2 ,

2 ,

2 ,

가 2

13.

12 ,

가

14.

12 ,

(screen print), (inkjet print), (Dry film laminate), (shadow mask) (

15.

12 ,

16.

1 ,

1

1 ,

2 ,

2

2

2

2

17.

16

가

18.

16

(screen print),

(inkjet print),

(Dry film laminate),

19.

16

20.

19

21.

16

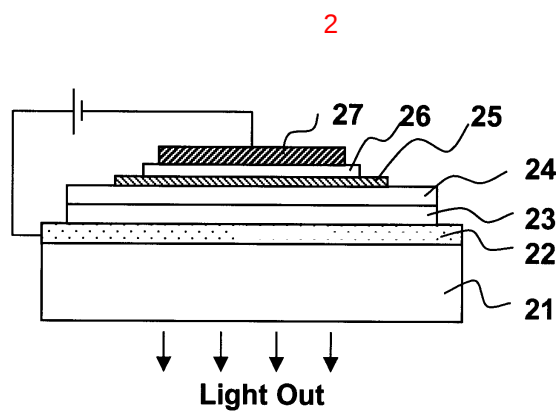
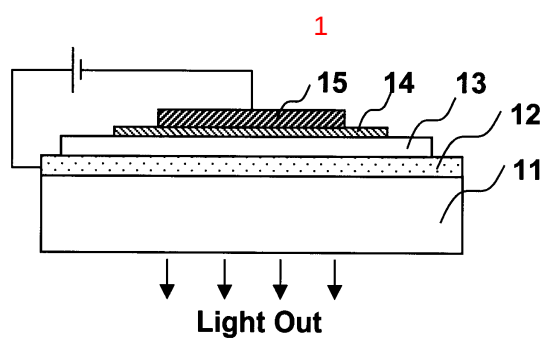
22.

21

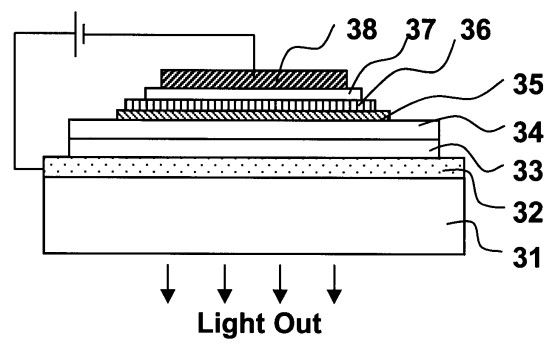
23.

16

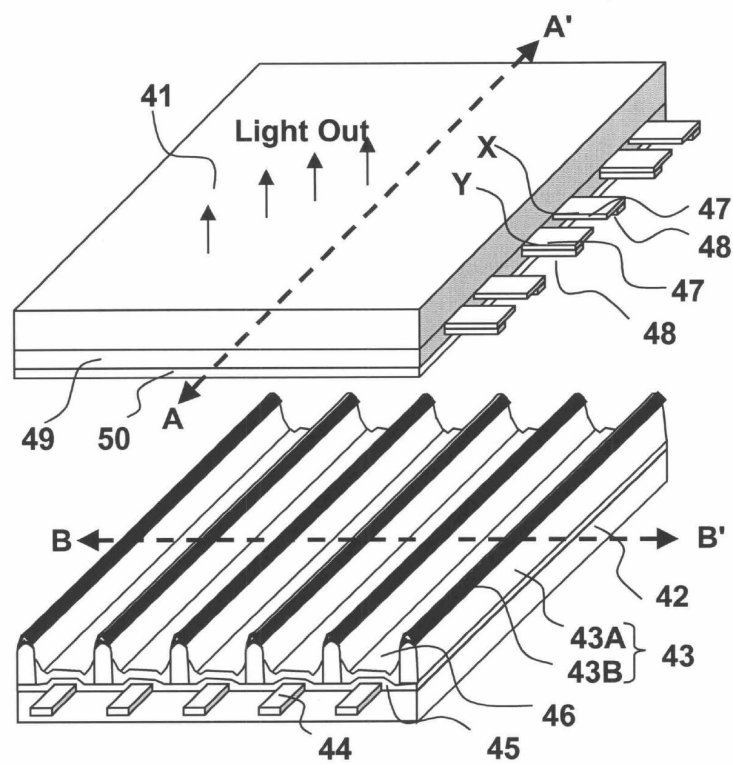
MgO

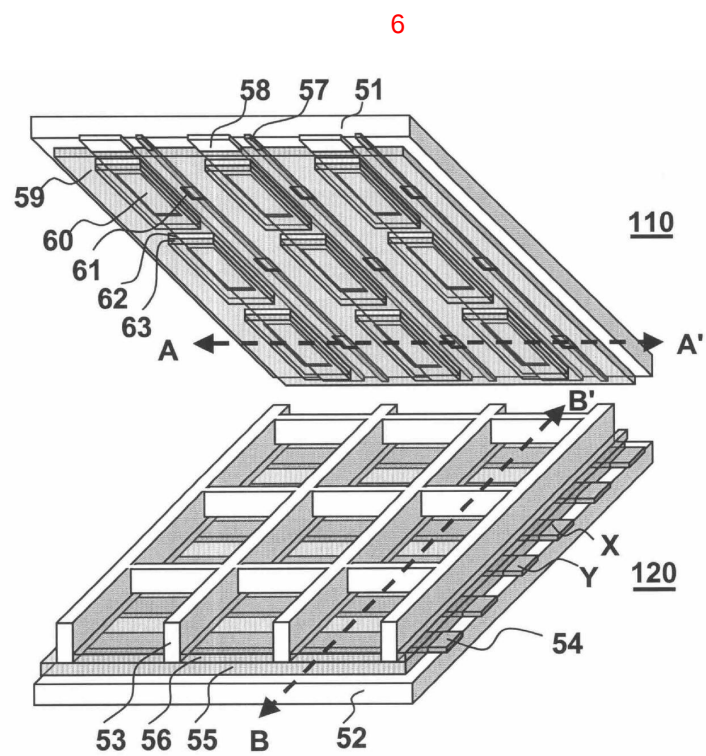
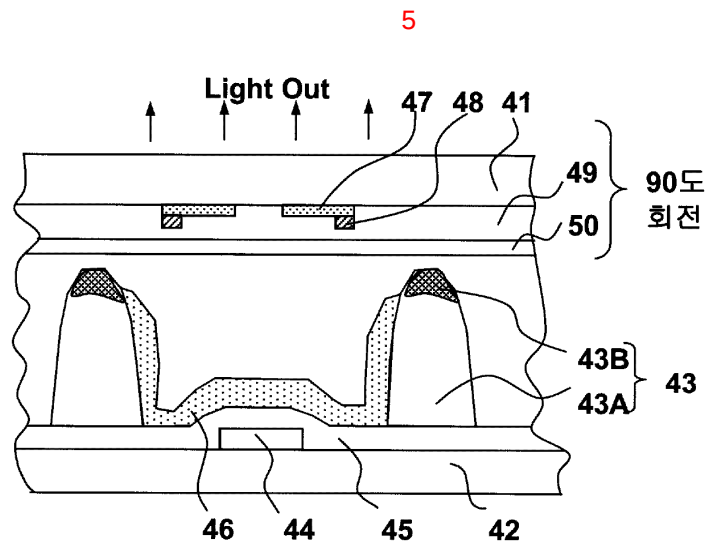


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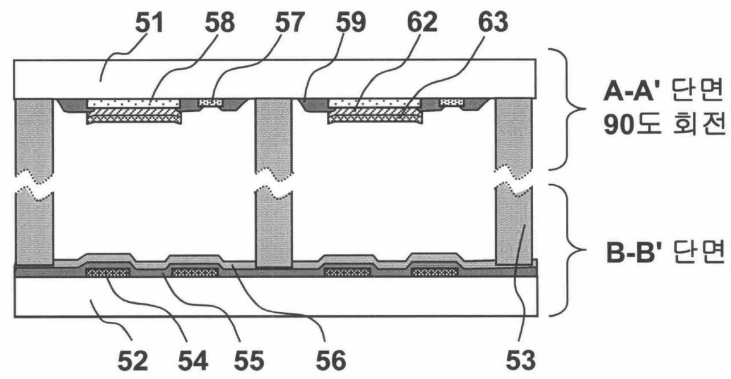


4

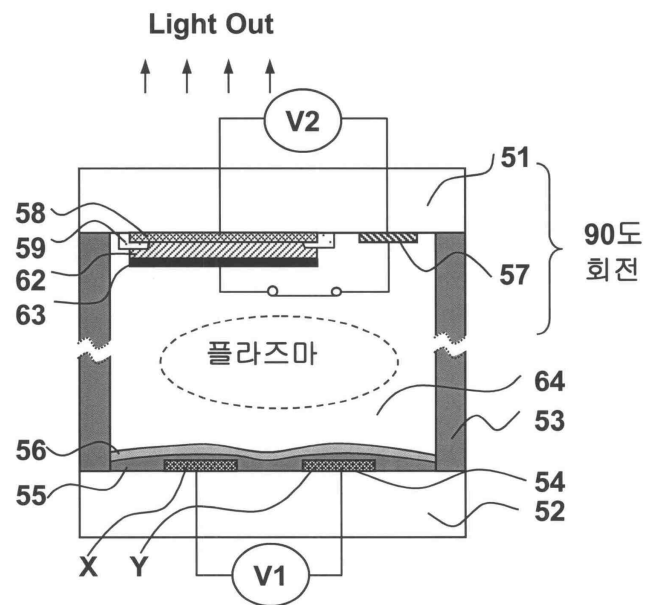




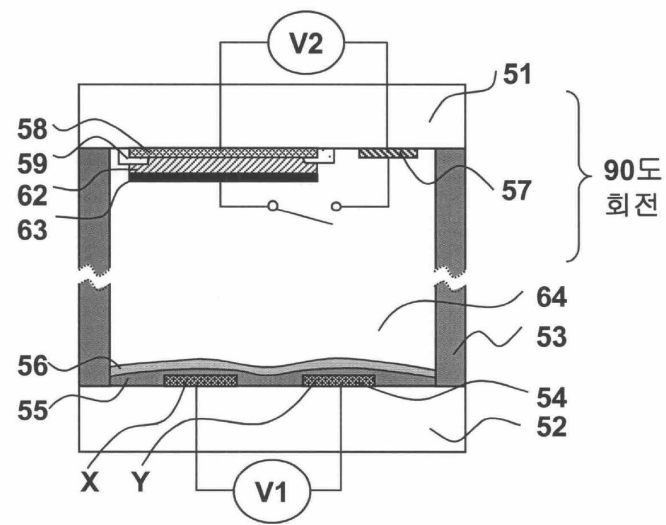
7



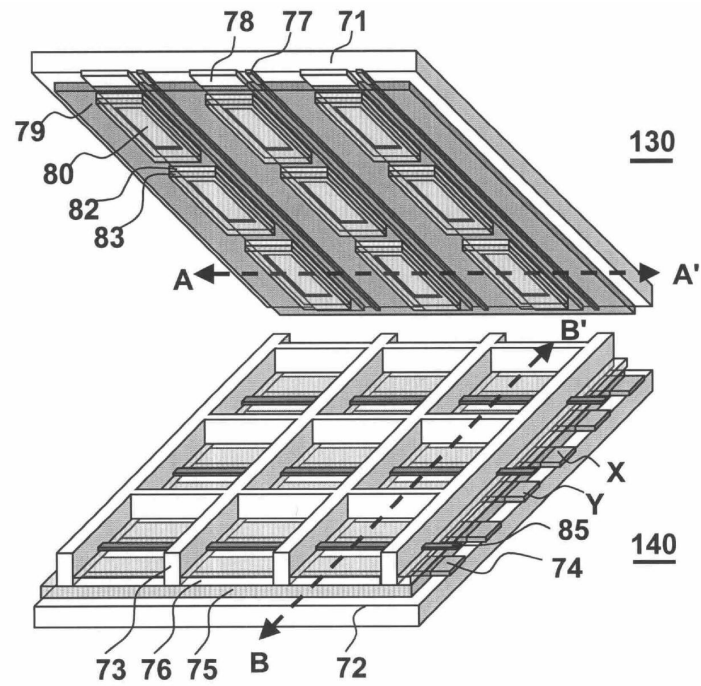
8a



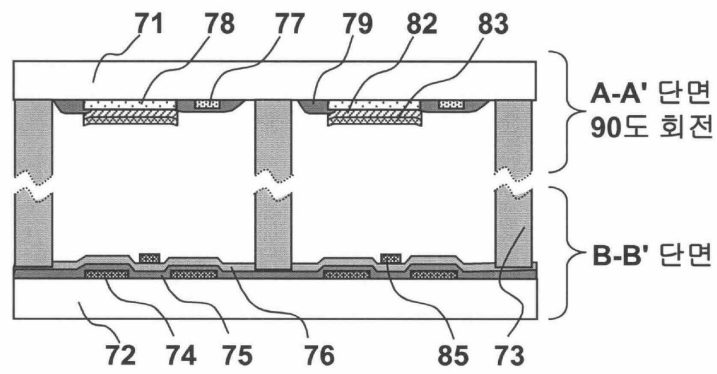
8b



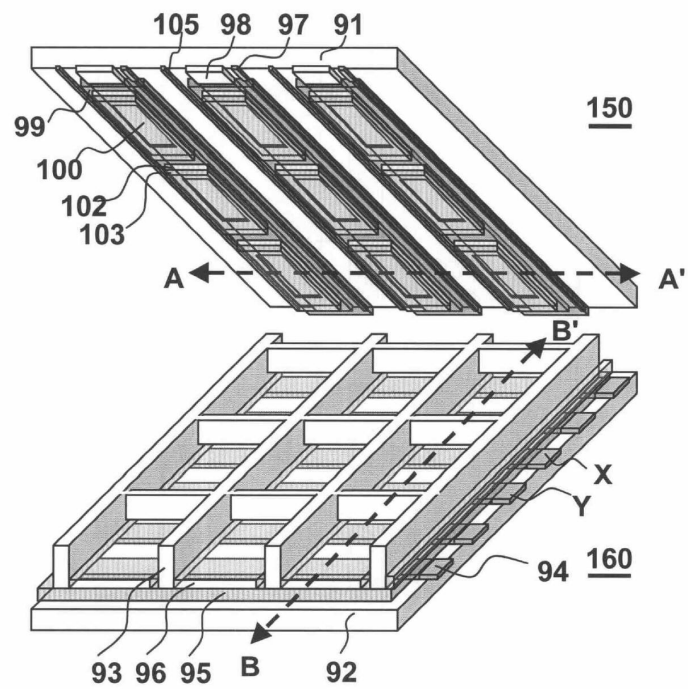
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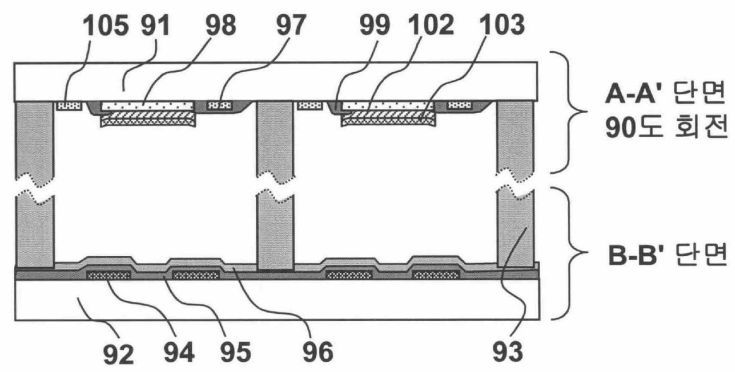
10



11



12



专利名称(译)	等离子开关型有机EL显示装置		
公开(公告)号	KR1020020042416A	公开(公告)日	2002-06-05
申请号	KR1020010069888	申请日	2001-11-09
[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	CHOI DOHYUN 최도현 BYUN BYUNGHYUN 변병현 YI SEUNGJUN 이승준		
发明人	최도현 변병현 이승준		
IPC分类号	H05B33/00		
CPC分类号	H01L27/3225 H01L51/0004 H01L51/0005 H01L51/001 H01L51/0011		
优先权	1020000071445 2000-11-29 KR		
其他公开文献	KR100429254B1		
外部链接	Espacenet		

摘要(译)

本发明涉及一种等离子体开关型有机发光显示装置，阴极层，所述负电极层的电致发光层，和由所述电致发光层上形成正电极层的EL单元，用于供应第一电源至该电致发光层第一电源单元，电连接到阳极层并与阴极层断开，等离子体发生器产生等离子体并使等离子体接触阴极层，以及第二电源以及用于将等离子体供应到等离子体显示面板的第二电源单元，其中阴极层电连接到第一电源单元。根据本发明，通过使用等离子体开关在驱动元件时，制造工艺简单，易于制造和降低成本，对于一个区域是容易烦恼。 6 指数方面 电致发光，等离子开关，障肋， - 1 -

