

(19)
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H05B 33/10(11)
(43)2002 - 0095081
2002 12 20(21) 10 - 2002 - 0029287
(22) 2002 05 27

(30) JP - P - 2001 - 00177682 2001 06 12 (JP)

(71) 가 가
가 가 6 7 35(72) 가 가 6 7 35 가 가
가 가 6 7 35 가 가
가 가 가 6 7 35 가 가

(74)

:

(54)

가 1
(alignment chamber) ,
,

가

.

4

1

2

3

4

5

6

7

8

9

10 9

11 10

12 11

13 12

14

15 13

16 15

17

18

19

20 19

21

22

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1. 40.

45. 50.

51. 52.

54. 55.

56. 57.

60. 61.

62, 63, 64. 70.

가 , ,

, 10V

cd/m²
가

가 .

(Cathode Ray Tube)

(multi - colored) - (full - colored)

3 5 가

가 가

가

가

가

가

가

가
가

가
가

1 1 2 1
가 가

2 1 2 1
가 가

1

1 2

1 2 A - A' (active matrix type)

1 (10), (1), (2), (7) (2)
(10), (10) (G), (R) (B) (11G, 11R 11B)
, (11G, 113R 11B) (12), (12) (16),
(17) (16) (18) (12)
(10), (11G, 11R 11B) (12) (PL)
(2) (11G, 11R 11B)
(12) (18)

, 2 (PL) (11G, 11R 11B)

(1) 가 가 (12)
, (1)

(2), (1) (3), (5)
(20) (3) (20) (4)

, (21) (22) (3) (5) (21)
(22) (4) (6)

(7) (6)

(10) (PL) (7)

(10) (7) (6) (8) (6)
, (Cr), (Fe), (Co), (Ni), (Cu), (Ta), (W), (Pt) (Au)
, 가 가

(11G, 11R 11R) (10) (11G, 11R 11
B) (13) (13)

(rib)(14) (13) 2 (14) (PL)
가 (14) (11G, 11R 11B) (10)
(spacer) (10)

, (14) (13) (14a) (14a)
 (14b) .
 (14a) .
 (14b) (12) (Al) (Cr)
 .
 3 (11G) . (11R 11B) .
 3 (11G) (10) (11a) (11b) (11c)
 11a) (11b) (11c) (11b) (11c)
 . (11c) (12) .
 (11a) (11b) (11c)
 .
 (11a) , m - MTDATA[4 - 4' - 4" - tris(3 - methylphenylphenylamino)trip
 phenylamine] (11a) 30nm .
 (11b) , - NPD[4, 4 - bis(N - 1 - naphthyl - N - phenylamino)biphenyl]
 (11b) 20nm .
 (11c) , Alq3[tris(8 - quinolinolato) ()] (11c)
 50nm .
 (12) (PL) , (14) (14)
 (14b) (12) (11G, 11R 11B) (13)
 (10) .
 (12) (Mg) - (Ag) 가 2 (binar
 y vapors) (12) 10nm .
 (16) (12) (16)
 , (In) - (Zn) - (O)
 가 (16) 200nm .
 (18) (11G, 11R 11B) (11c) (16)
 ,
 가 가 .
 4 .
 (40) (11G, 11R 11B), (12) (
 16) .
 4 , (40) (50), (60),
 (70), (80) (90) .
 (50) (51), (52), (53), (alignment chamber) (54),
 (55), (56) (57) .

(51), (52), (53), (54), (5), (56)
(53), (54), (57) (56) (Gt) (51), (52),
(Gt) (45)

(51) , (11G, 11R 11B), (12) (16) (1)

(51) (load lock chamber)

5 (51) (1)

5 , (spacer) (14)가 (1) , (14)
(10)

(52) 5 (1) (10) (14) ,
(1)

(53) (1) () (53)

6 (1)

6 , (200) (200)

(200) (1) 가 (202) (201)
(11R, 11G 11B) (200) (11R, 11G 11B)

, (11R, 11G 11B) (1) , (200) (1)
(1) (11R, 11G 11B) (200)

(100) (1) 가 (101) (101)
(102)

(102) (101) (102)
(45) (arm)

(101) (200)

6 , (1) (1a) (101) (1) (1a)
(101a)

(1) (200) (1) (1b) (200)
(101) (101a) (1) (1a) ()

(1) (101) (101a) (1) (1a) , (200)
 (1) (101) .

, (200) (201) (201) (slack) (1b) .

(57) (100) . (57) .

(55) (45) . (45) 가
 (45a, 45b 45c) . , (45a) (1), (200) (100)
 (45d) . , (45) (45a, 45b 45c)

(45)가 (1), (200) (100) .

(54) (1) (200) (100) (1)
 (200) .

7 (54) . (71 81) /
 (93) 7 .

7 , (54) (300) (310) , (314)
 (320) .

(310) (310a) . (100) (102) (310a)
 (310) (connection rod) (311) (300)

(330) .

(330) (Z -) (310) . (330) ,

(314) (317) (315) , (315) (316)
 , (316) (1) . (316) 6
 (200) (201) 4 .

(314) (317) (300) / (340) .

/ (340) (314) (317) () 가
 Z - Z - X Y (14) 가 .

/ (340) , .

(320) (200) . (320) (320) (3
 21) (350) . (350) (320) Z - 가
 (350) 7 , (320)

(56) (54) (100) (1) (200)
 (60) .

(60) (11G) (60) (61)
(62, 63 64) , (62, 63 64) (Gt) (61)

(45) (61) (45) (62, 63 64)
(70) (1) (200)

(62) (11G) (11b)

(62) (11G) (11c)

8 (62, 63 64)

(80) (70) (73, 74 75)
(83, 84 85) 8

8 (401) (400) (1) (200)
(100)

(401) (100) (102) (401a)

, (401) (402) (402) (400) (430)

(430) (402) (430)

(402) (430) , (1) (200) (402)

(400) (Vs) 가 (420)가

가 (420) (420a) (420a) (440) (420a)
(440) (C1 C2)

(440) (420a)

가 (420) (421) (421) (422)

(422) (421) , 가 (420) (421)
가 , 가 (420) (Vs)가

(422) 가 (420)

(70) (11R) (70) (71),
(73, 74 75) (72) (73, 74 75) (73, 74 75) (Gt)
(72)

(71) (50) (54) (71)
(54) (1) (200) , (1) (200) ,
(100) (1) (200) .

(72) (45)가 (45) (73, 74 75)
(80) (1) (200) .

(73) (11R) (11a) .
(74) (11R) (11b) .
(75) (11R) (11c) .

82) (80) (11B) (80) (81), (83, 84, 85) .

(81) (70) (71) .
(81) (71) (1) (200) , (1) (200)
(100) (1) (20) .

(45) (82) (45) (83, 84 85)
(90) (1) (200) .

(83) (11B) (11a) .
(84) (11B) (11b) .
(85) (11B) (11c) .

(90) (91), (92), / (93), (94), (95),
(96) / (97) . (91), (92), / (93),
(94), (95), (96) / (97)

, (91), (92), / (93), (94), (95), (96)
/ (97) (Gt) (92) .

2) (91) (80) (11B) (1) (200) (9
.)

/ (93) (54, 71 81) /
(93) (100) (1) (200) .

(94) (200) (1) (12) 가
. , .

(95) (12) (1) (16) .
(95) 가 . ,

(96) (16) (1) (90) .

/ (97) (1) (200) (100) (90)

(92) (45) (45) (1), (200)

(100)

(40)

, 5 (1) 가 (57) , ,

가 (53) , 가 (57)

, (60), (70) (80) 가 (420)가

가 (Vs) (60), (70) . 가 (420) (440)

. 가 (60), (70) (80)

가 . ,

가

, (57) (57) (1) (45)

(52)

(52) 400sccm, 50W 120

(1)

, 9 (57) (45)

(45d) (54)

9 , (Gt) (54) (100) (102) (310)

(310a)

, 10 , (310) (330) (310)

, (100) (45) (45d) (100)가 (310)

, 10 (100) (54) , (45)

(53) (200) (54)

(200) (320)

, 11 (320) (350)

(320) (200) (45) (320)

, (100)가 (310) (200)가 (320)

12 , (52) 가 (1) (45)

(54)

12 (100), (1) (200) (54) (1) (320) .

, 13 (314) (1) (314) (45) / (340) (45d) (316) .

, (1) (100) (310) (200) (320) (314) .

, (1) / (340) (1) X, Y (1) (200)가 (200) (1) .

, 14 (1) (11G) (200) (200h)가 가 .

(1) (200) (1) 15 (320) (320) (200) (1) (200) .

, 16 (320) (1) (100) (200) (101) (101) (200) (1) .

(1) 가 .

, (200) (1) 14 (200)가 (14) (200) (10) .

, 16 (100), (1) (200)가 (320) (45) (45d) (200) (320) (320) .

, (100), (1) (200) (310) (100), (1) (200) (45) (310) (45d) .

6) (56) (45d) (100), (1) (200) (5) .

, (56) (100), (1) (200) (61) (62) .

17 (100), (1) (Gt) (62) (400) (200) (5) (45) 가 (40) 1) .

(1) (200)가 (401) , 18 (401) (440) (11G) (11a) .

(11a) .

, (1) (200) , (11a) .

0) (11a) , 가 (100), (1) (20
b) (61) (45) (63) , (11G) (11

(11G) (11c) (64) .

, (1) (10) (11a), (11b) (11c)
(11G) .

, (11G) (1) (200) (70)
(71) .

19 , (100) (1) (200) (45) (45d)
(71) , (320) (200) (45d)
(320) .

, 20 , (310) ,
(100) (1) (200) .

(100) (1) (200) , (314) .
(314) , (1) (200) .

, (100) (310) , (320) ,
(1) (314) .

, 15 16 , (1) (200)가 .

(71) , 21 가 , (200) (200h)가 (1) (

11R) 가 , 15 16 (1) (200) (73, 74 75) (200)
(100) (11R) (11a), (11b) (11c) .

(11R) , (1) (200) (81) , (71)
, (1) (200) (100) .

(81) , 21 , (1) (11R) (200)
(200h)가 가 .

, 15 16 가 (100) (1) (

(200) (11a), (1) (200) (83, 84 85) (

11B) (11b) (11c) .

(11B) , (1) (200) (90) .

(90) , (1) (200) / (93) .

(93) , (1) (200)가 / (93)
(81)
(100), (1) (200)

(1) (200) , (1) (94) , (100) (20
0) / (97)

(94) , (12) , (Mg) (Ag)
(co - deposition) , Mg - Ag (12) 10nm
, Mg Ag 9:1

, (1) (11G, 11R 11B) (12) , (1) (95)
, (16) (12) 가
(Ar) (O₂) 가 (Ar/O₂=1000) , 0.3Pa ,
40W

(16) , (1) (96) (96) (1)
(96) , (17) (18) ,

, / (93) (200) (100) / (97)
.

/ (97) (200) (100) / (97)
.

(200) , (200)
가

, , (11G, 11R 11B)
,

, , (1) (200)가
,

, , 가 ,
,

, , (1) (200) ,
.

.

,

,

,

, 3 가 , , .

, (chamber) , (Gt) .

, , U - .

, 가 .

, , , .

(57)

1.

, 1 , 1 , 2 , 가 1 , 가 , , .

2.

1 , .

3.

2 , .

가

.

4.

1 ,

.

5.

1 ,

.

6.

5 ,

.

7.

1 ,

2

.

8.

7 ,

.

9.

1 ,

1 2 ,

1 2 ,

1 , 2

1

.

10.

9 ,
1 2 1 2
2
.

11.

, 1 , 1
2
,
가 가 1 ,
가 ,
.

12.

11 ,
1
.

13.

.

14.

11 ,
,
.

15.

11 ,
.

16.

15 ,

,

,

가

.

17.

11 ,

1 2 ,

,

1 2

가

1 ,

1

1 ,

1

,

가

2 ,

2

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2

2

.

18.

17 ,

2

,

1 2

2

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19.

18 ,

,

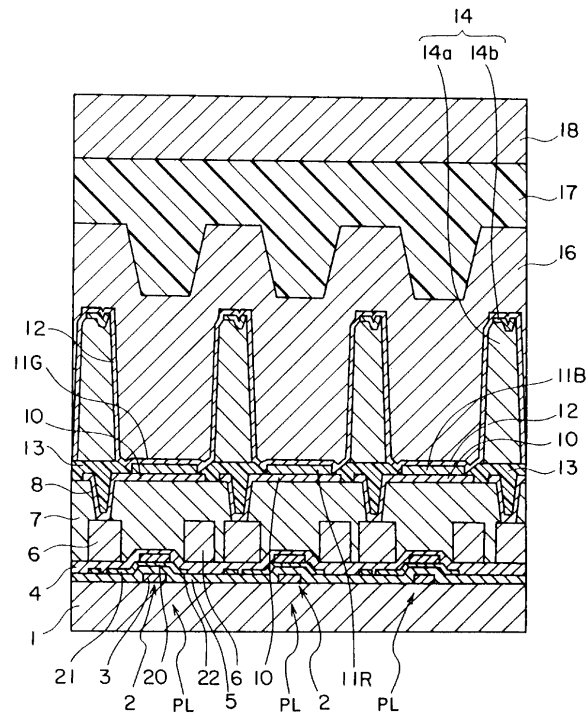
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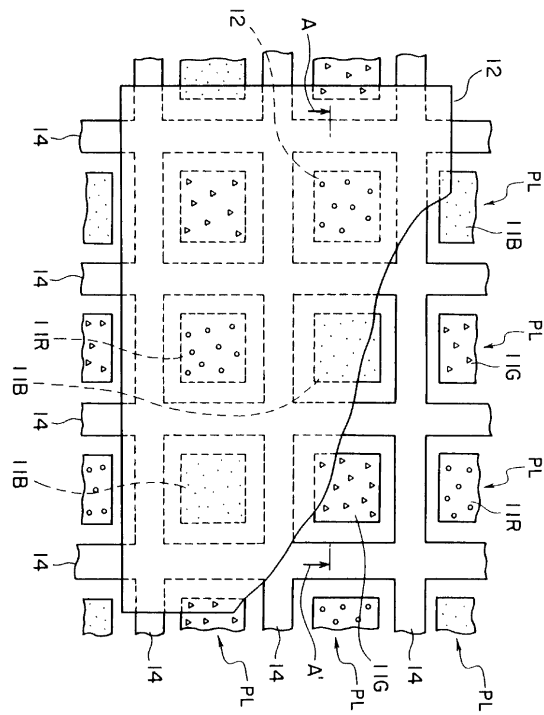
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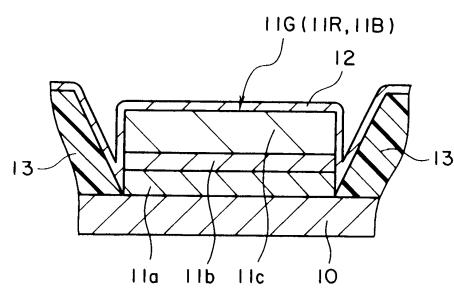
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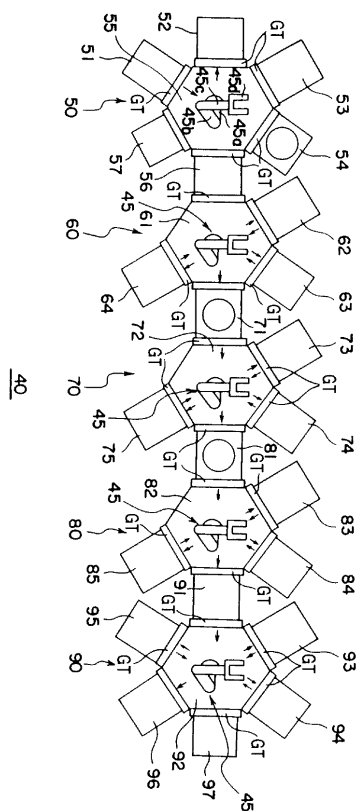
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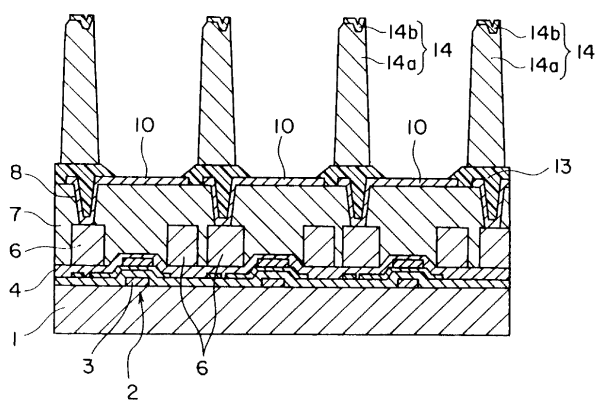
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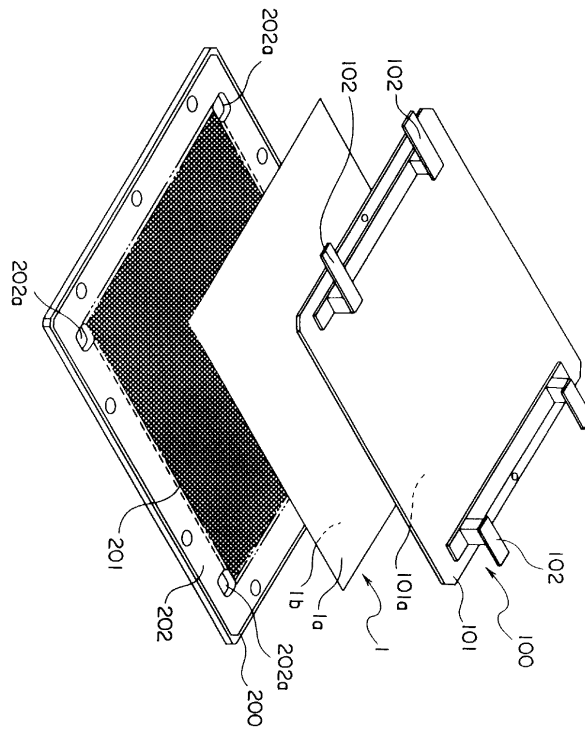
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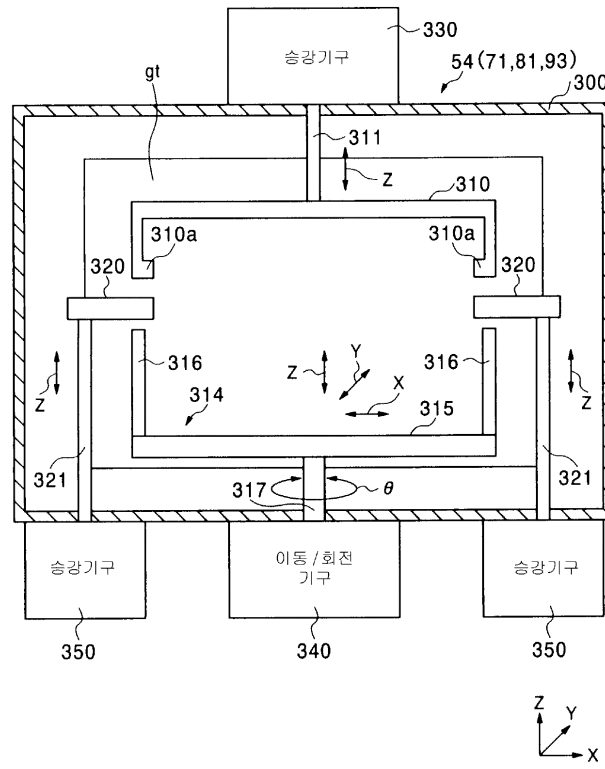
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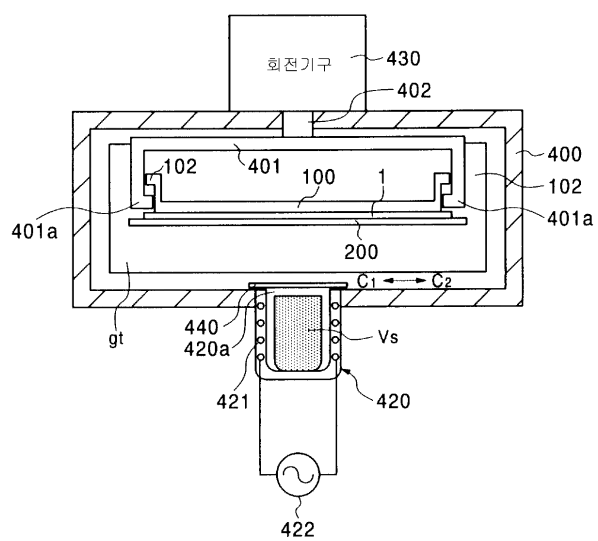
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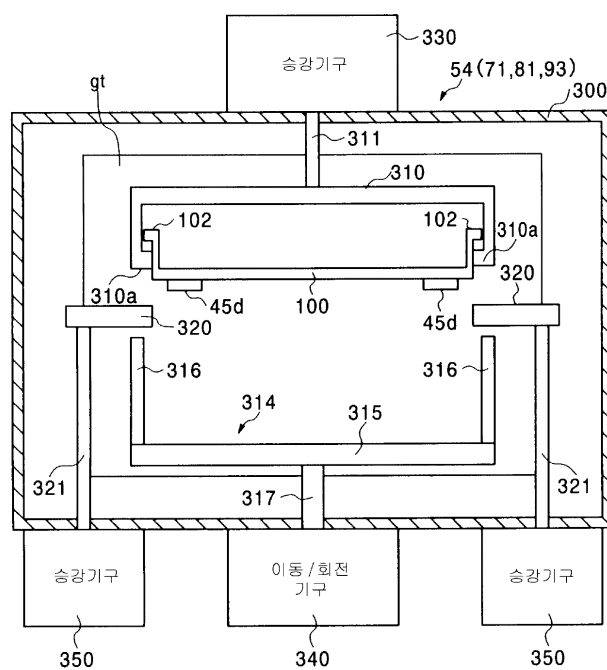
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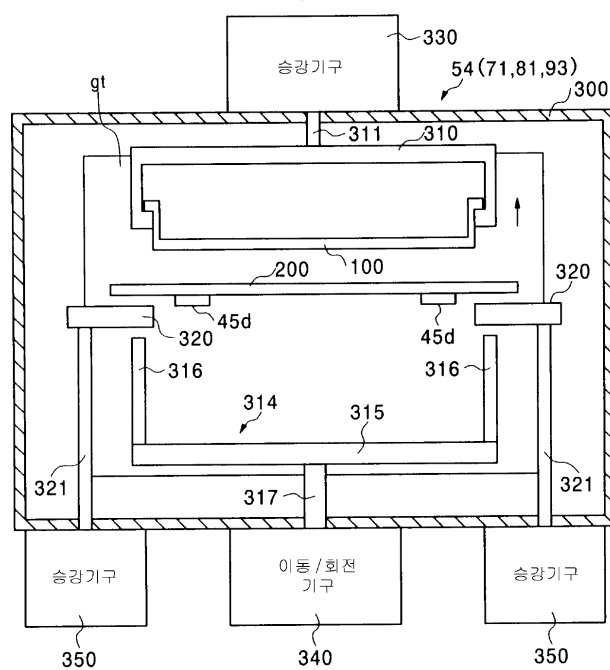
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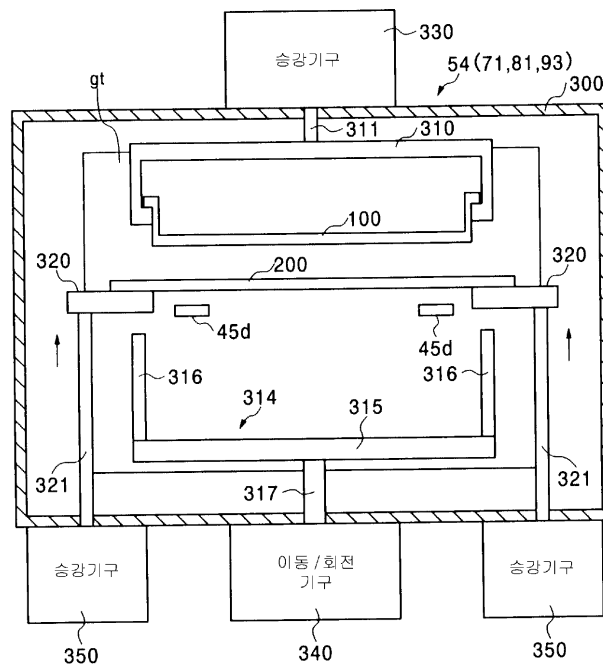
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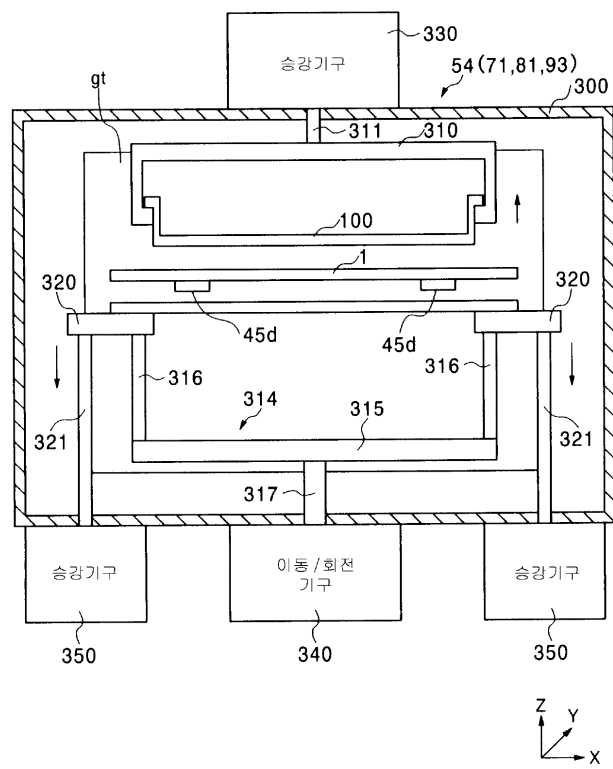
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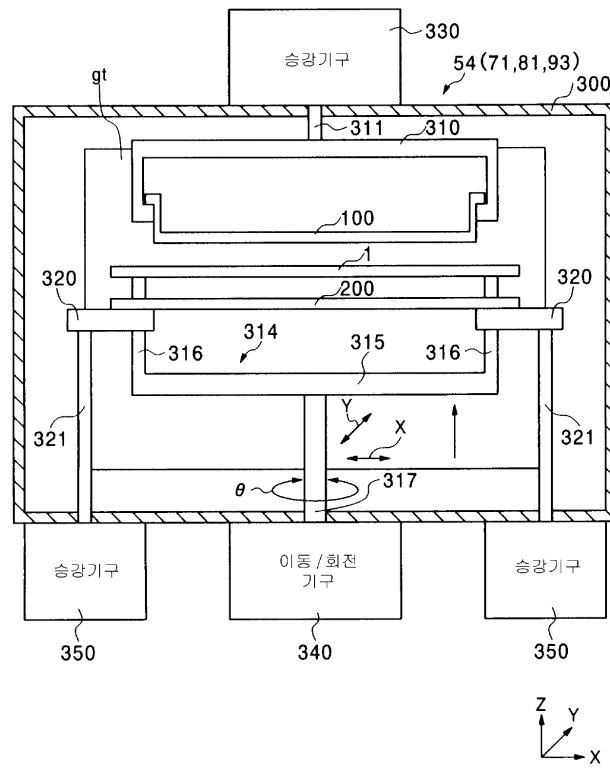
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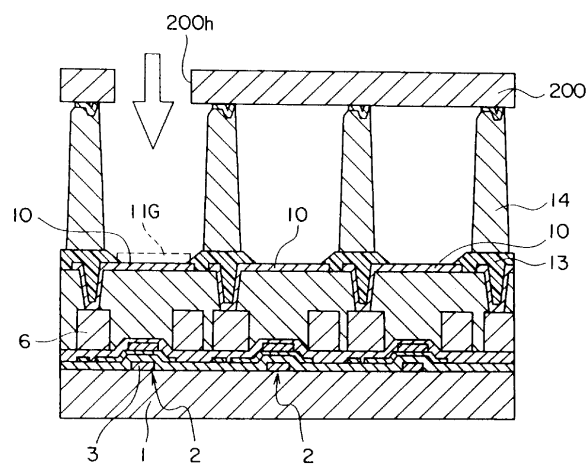
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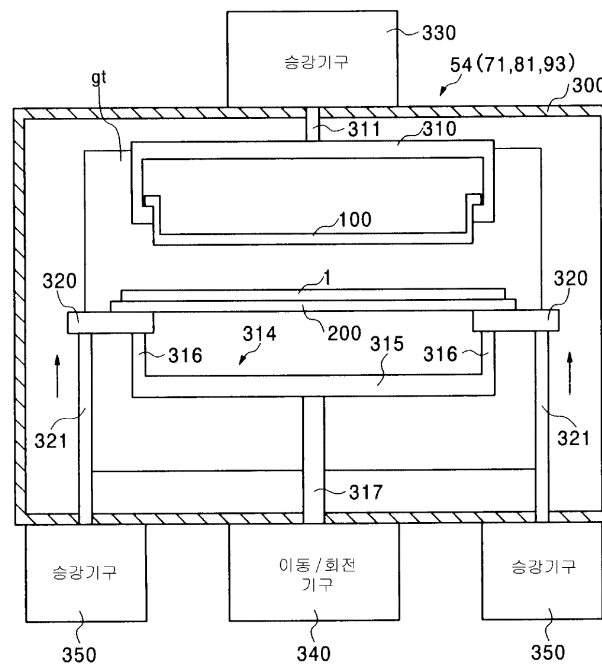
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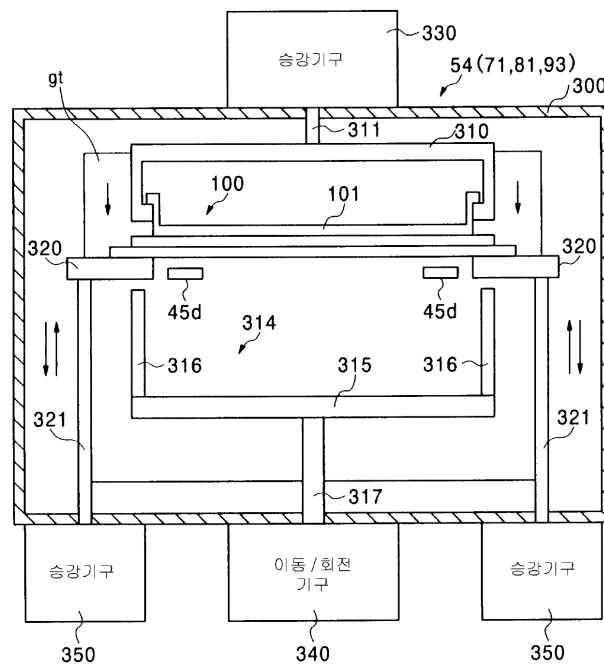
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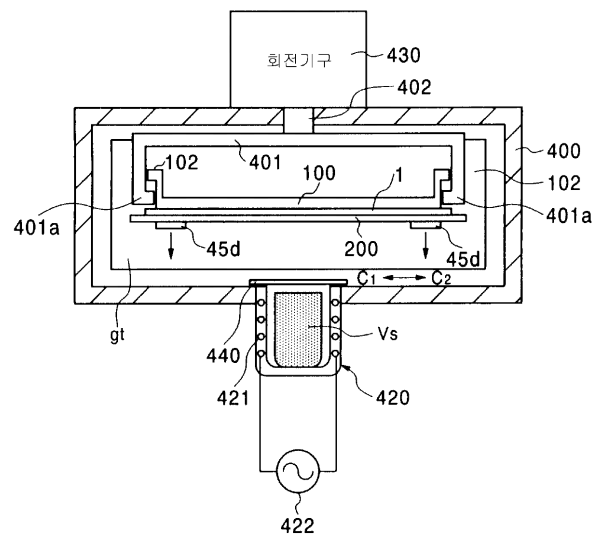
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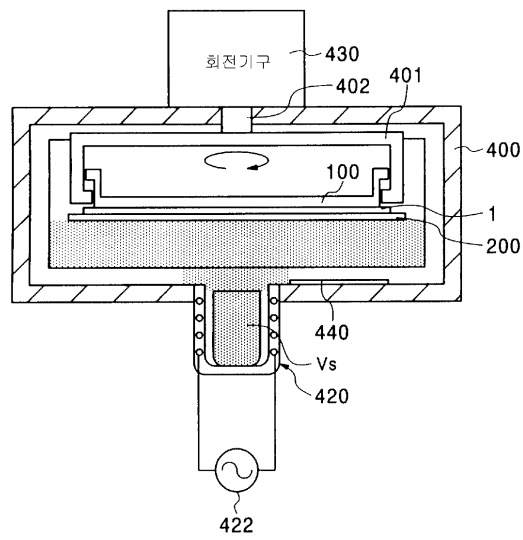
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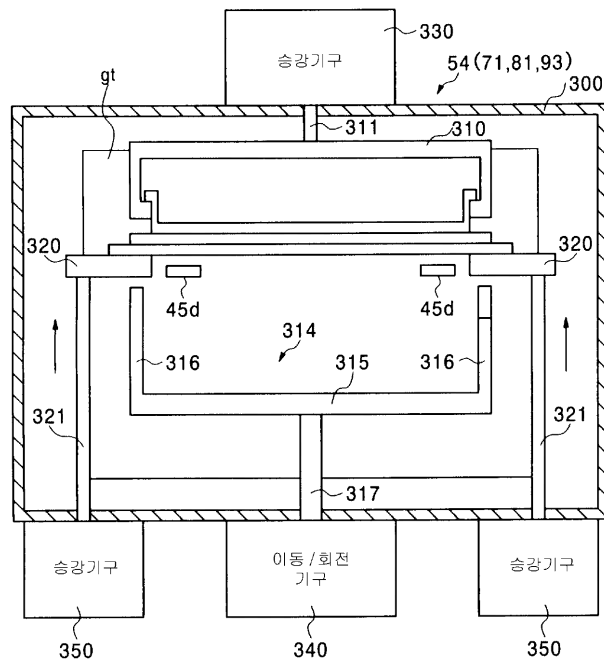
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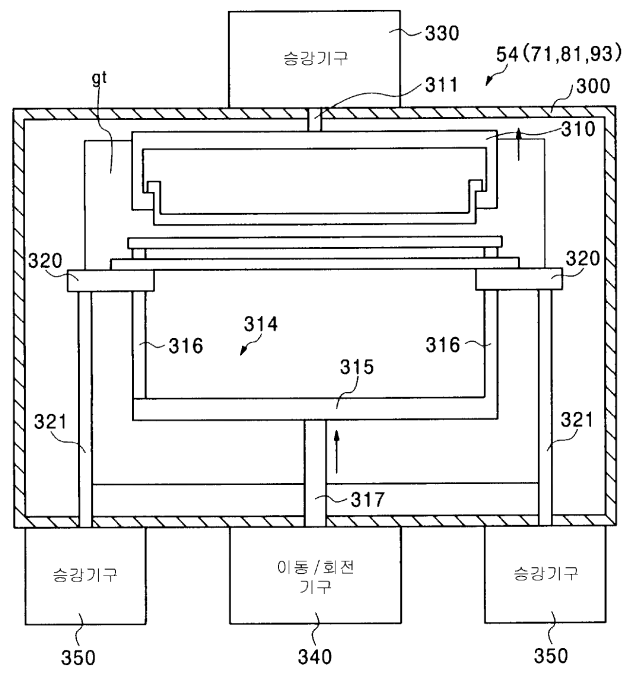
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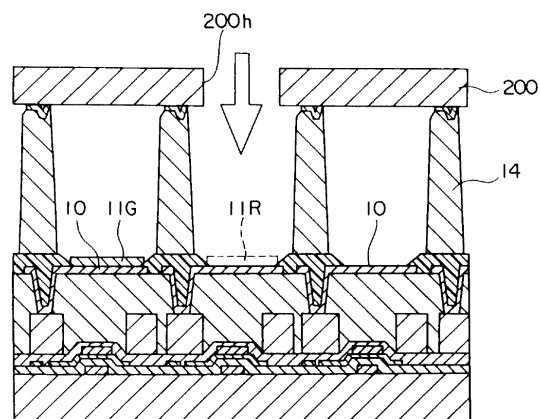
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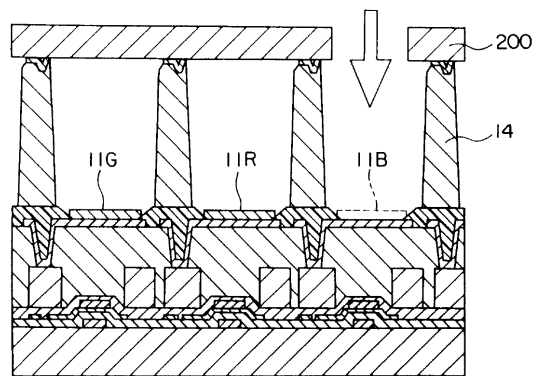
20



21



22



专利名称(译)	用于制造有机电致发光显示装置的设备和方法		
公开(公告)号	KR1020020095081A	公开(公告)日	2002-12-20
申请号	KR1020020029287	申请日	2002-05-27
[标]申请(专利权)人(译)	索尼公司		
申请(专利权)人(译)	索尼公司		
当前申请(专利权)人(译)	索尼公司		
[标]发明人	MORI TAKAO 모리다카오 YAMAGUCHI MASARU 야마구찌마사루 KAMIYAMA ISAO 가미야마이사오		
发明人	모리다카오 야마구찌마사루 가미야마이사오		
IPC分类号	H01L51/50 C23C14/56 H01L27/12 C23C14/04 G09F9/30 H05B33/10 H01L51/56 H01L51/40 H01L27/32 C23C14/12 G09F9/00 H05B33/12 C23C14/02 H05B33/22 H01L51/00		
CPC分类号	H01L51/0008 C23C14/12 H01L51/56 H01L27/3244 H01L27/3211 H01L27/12 H01L27/3295 C23C14/022 C23C14/042 C23C14/568		
优先权	2001177682 2001-06-12 JP		
外部链接	Espacenet		

摘要(译)

本发明涉及一种对准室，用于将具有对应于预定图案的开口的掩模与其上形成有第一电极层的基板对准，并将掩模和基板可拆卸地相互连接，一种用于制造有机电致发光显示装置的设备，其具有用于将附着的掩模和基板输送到多个真空处理室中的一个并且在多个真空处理室之间顺序输送所转移的掩模和多个真空处理室的输送机器人Lt;; 4

