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(A)(51) 。 Int. Cl. ⁷
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(43)2002 - 0002984
2002 01 10(21) 10 - 2000 - 0037364
(22) 2000 06 30

(71) 136 - 1

(72) 1092 1142 1106
465 6 604 604
49 - 1 102 1206

(74) :

(54)

가

가

$(2n+1)\lambda/4$, λ , $n=0$) 가 , $d\Delta n = (2n+1)\lambda/2$

FFS 가

1

1

2 1

3

4

, 4b

5

, 5b

6

()

10, 110 : 12 :

21, 121 : 23, 123 :

31, 131 : 33, 133 :

41, 141 : 43, 143 :

51, 151 : 53, 153 :

61 : 63 :

65 : 67 :

90

TN(Twisted Nematic)
 VA(Vertical Aligned)
 IPS(In - Plane Switching)
 IPS
 FFS(Fringe Field Switching)

, FFS

(98 - 9243)

가

가,

, FFS

가

가

$$d\Delta n = (2n+1) \lambda / 2 \quad (2n+1) \lambda / 4 ($$

 λ , n 0) 가 ;

Ag, Al, AlNd, Cu

, 500 5000

, 70

, Normally Black Normally White

$$\lambda/2 \times n$$

가

가

$d\Delta n = (2n+1) \lambda / 2 - (2n+1) \lambda / 4 (\quad , \lambda$
 $, n = 0)$ 가 ;
 ; ,

$$\frac{1}{3} \quad , \quad \frac{2}{3} \quad , \quad \frac{1}{3}$$
$$\begin{array}{ccccccc}
& & & & & & (12) \\
& & & & & & , \\
& & (10) & , & (10) & & (21) \\
(21) & & (23) & & (d) & & (23) \\
& & & & & & (31) \\
(33) & , & & & (51) & & (53) \\
& & (33) & & (41) & & (43) \\
& & & & & & . \\
& & & & & & (31)
\end{array}$$

(10)

(21) (R1) (12) (12) (R2)
 , (23) (12) (R1) (R1) (R2) ,
 (51) (53) (F) 45 90 (α)
 가 (10) (12) (F)
 (21, 23)

(41) (P1) , (R1) (R2) , (43) (P2)
 (41) (P1)
 (31) , (61a, 61b)
 (61b) (65) (61a, 61b)

(61a, 61b) 가 (63a, 63b)
 (61a, 61b, 63a, 63b) , (6
 1a, 63a) (67)가 (67)
 (61a) () , (63a)
 () , (51)
 ()

(53) (65) 가 가 (53) , (51)
 (Overlap) (53) 500 5000 ()
 Ag, Al, AlNd, Cu (53) (F)가
 (51, 53) (10) (10) (R)
 (12) retardation) $d \Delta n$ $(2n+1) \lambda / 2$ $(2n+1) \lambda / 4$ 가 , λ , $n = 0$ 가 (5
 (53) (51) (31) (53)
 (10) (53) (51, 53)
 (F)가 (51) (53)
 (31, 33) d

(33) (23) , , ()
)가

4 5

, 4

4

, 4a

, 4b

(61a) 가 가 , (41) (P1)

, (10) (10) (41) (P1) (12)
 (41) (12)
 (53) (51) (41) (P1) (43)
 (P2) (43)
 가 .

, (61a) 가 가 , (63a) 가 가 ,
 (67, 2)가 (53) (51) 가
 (F)가 , (F) (51, 53) 가
 (41) (P1) (F) (10) (12)
 (43) (P2)
 (12) Δe 가 (21, 23) (R1, R2) (21, 23)

(12) (41) (P1) (12)
 (α) (10) (12) (12)
 가 90° 가 180° (, $\Delta nd = \lambda / 2$)
 가 $\sin^2 2\chi$
 $\sin^2 (\pi \Delta nd / \lambda)$, χ (12)
 , Δn (12) , d , λ , $\Delta nd / \lambda$
 (10) (12)
 . χ 가 45° $\pi \Delta nd / \lambda$ 가 $\pi / 2$ 가 . ,

, 5 , 5a , 5b

(61a) 가 가 , (43) (P2) (P2)
 (10) (43) (12) (12)
 (10) (10) (53) (51)
 (43) (P2) 180 (43) (51, 53)
 가 (43) ,

, (61a) 가 가 , (63a) 가 가 ,
 (F)가 , (10) (12) , (43)

(P2) (12) (12) (α) (10) (12)

(53) (51) (12) 90 가 (10) (12)

가 , 가

(53) (51) ,

180

(51, 53) (10) 가 (43) (12)

90 가 ,

(43) (P2) , (α) (43) (P2) (23)

45 (43) (P2) (23) (R2)

(R2) , (51) (12) (53) (F) 45 90 (R1)

(R2) (51) (12) (53) (F) 0 45

ly Black (43) (P2) (41) (P1) (R1) (R2)

hite (43) (P2) , (41) (P1) (R1) NB , Normal

(12) 가 (R1) NW , Normally W

(51) (53) (31)

(153) (155) (131) (153) (

151) (131), (133), (141) (110), (121), (123),

(143)

(51) (53) (33)

(51) (53) (51, 53)

(33)

(33) (51) (53)
6

(33) (43) (43) $\lambda/2 \times n$
Normally Black Normally White

FFS

가

(57)

1.

가

가

가 ; $d\Delta n = (2n+1)\lambda/2 = (2n+1)\lambda/4$ (, λ , $n = 0$)

2.

1

가

3.

1 ,
 , 70 , 500
 5000 .

4.

3 ,
 , Ag, Al, AlNd, Cu .

5.

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6.

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7.

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 가

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 가

가 ; $d\Delta n = (2n+1)\lambda/2 - (2n+1)\lambda/4$ (, λ , $n = 0$)

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8.

1 7 ,

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45 90

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9.

1 7 ,

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0 45

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10.

1 7 ,

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11.

1 7 ,

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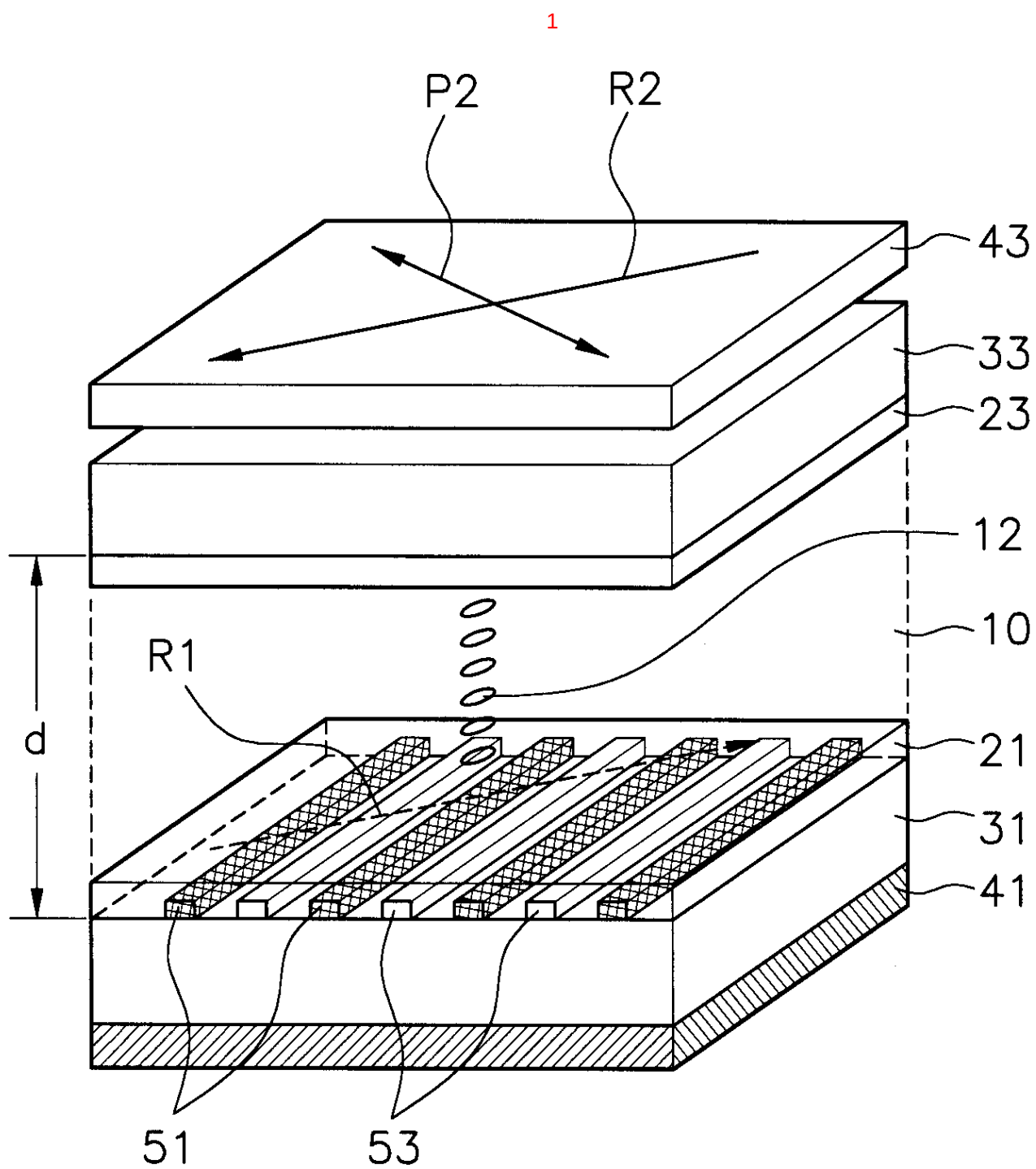
12.

1 7 ,

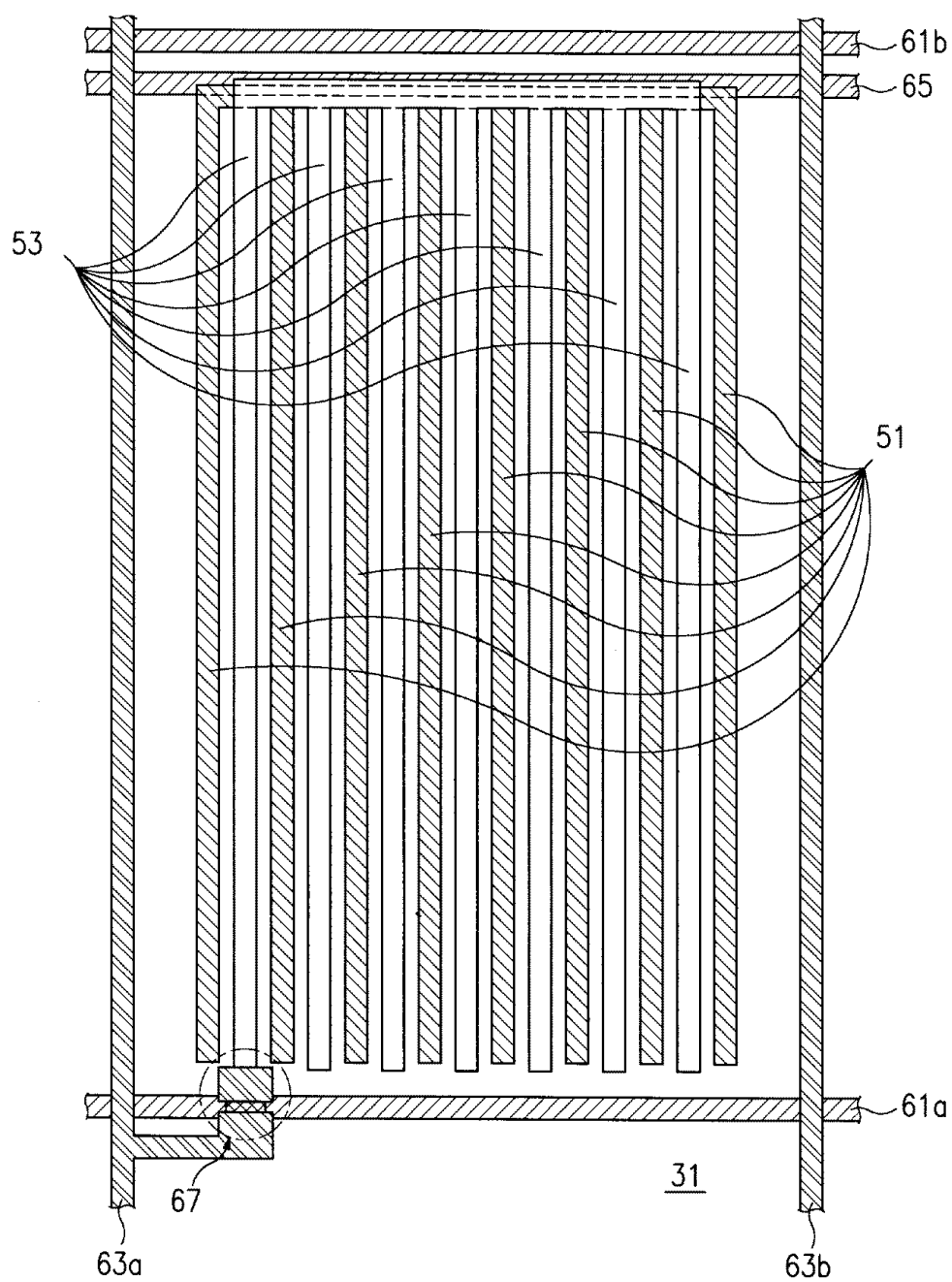
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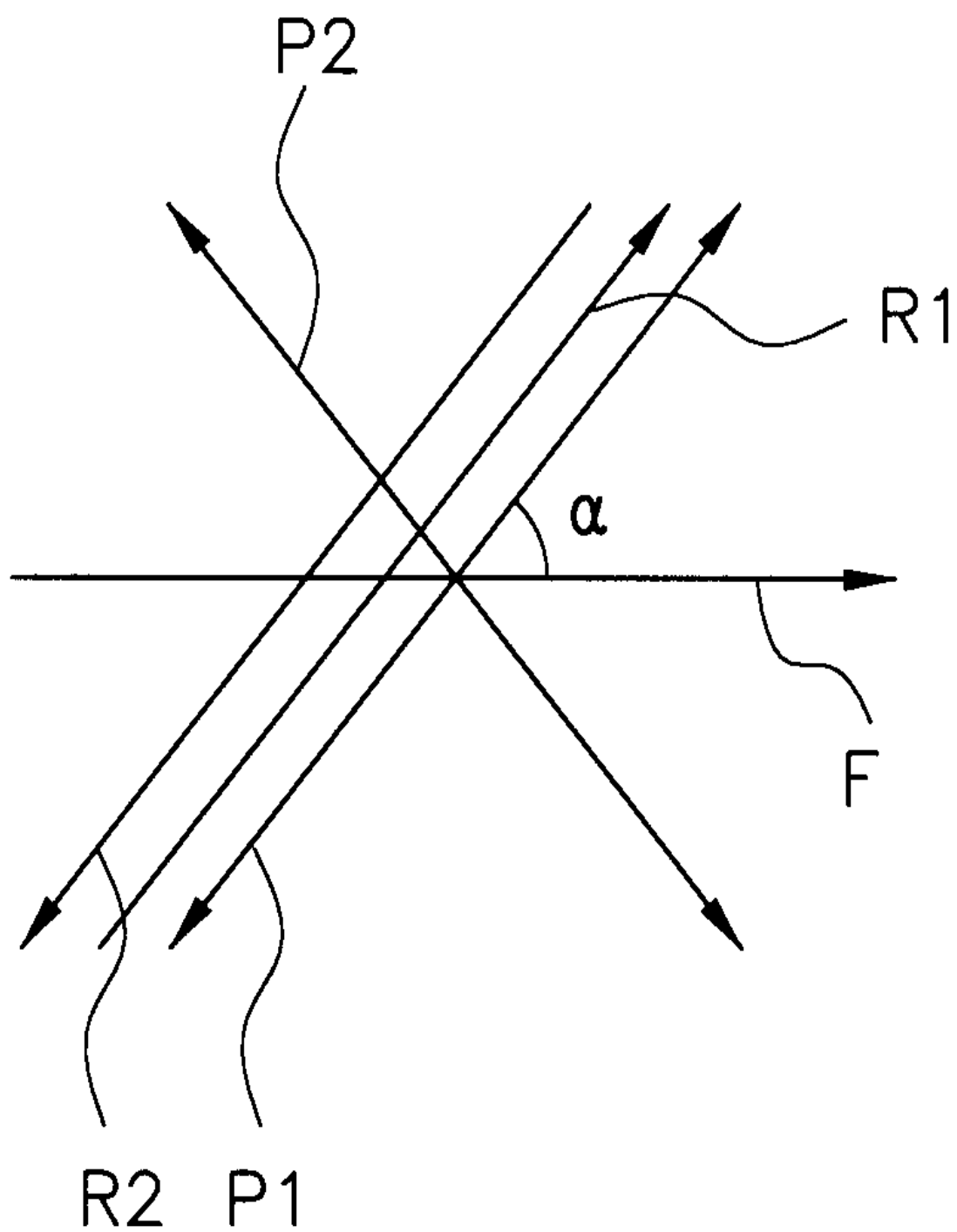
 $\lambda / 2 \times n$

.

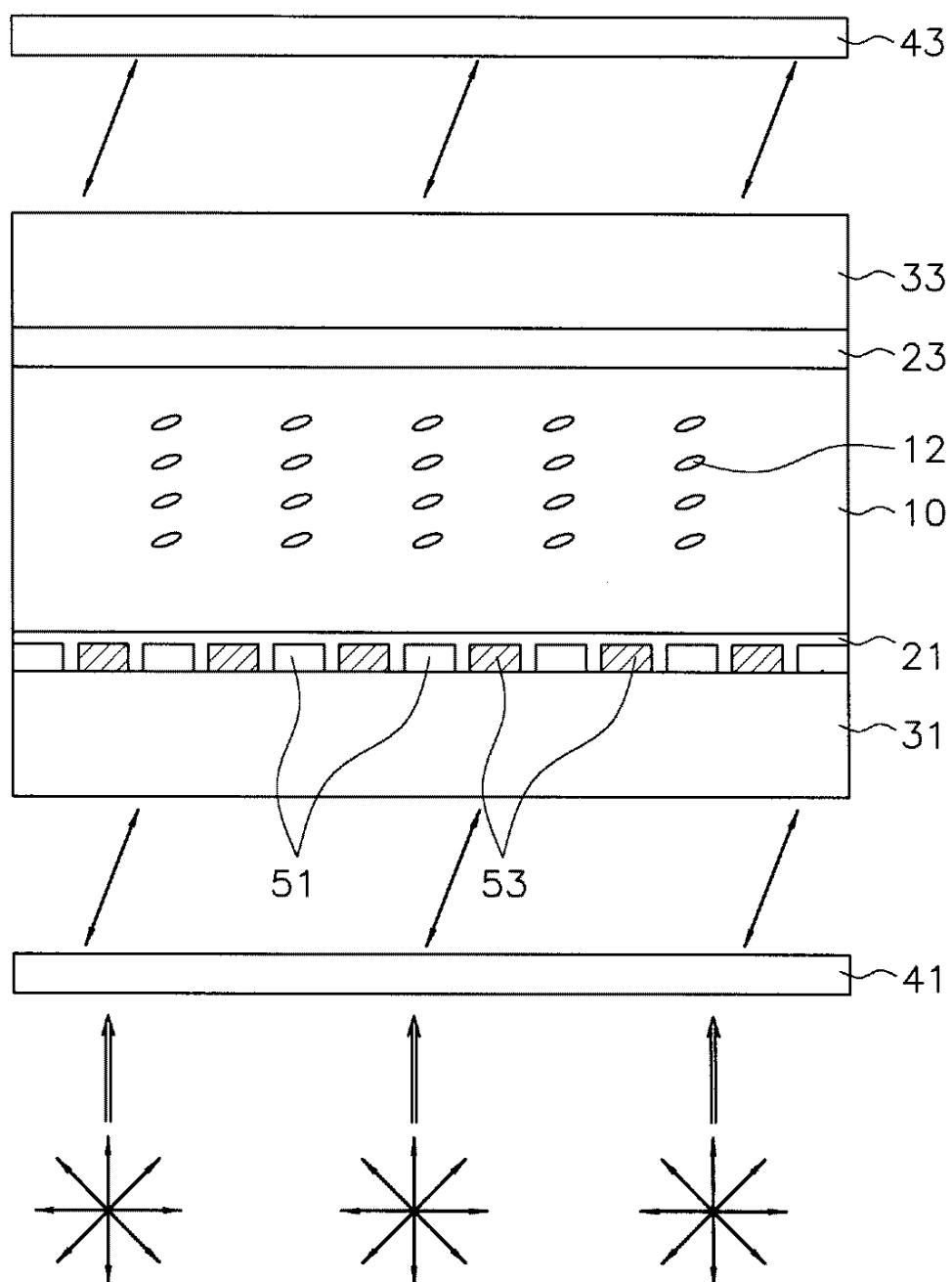


2

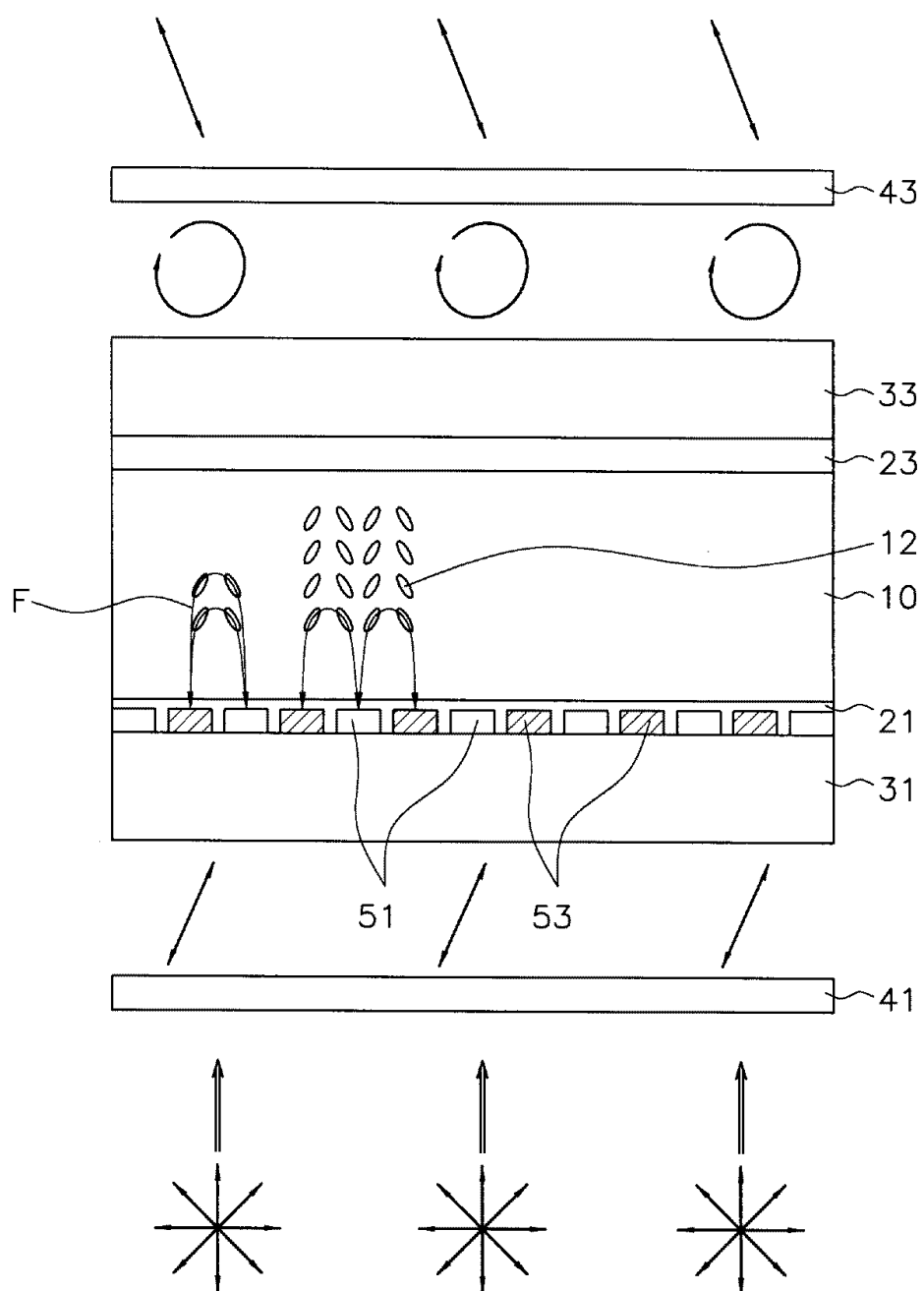




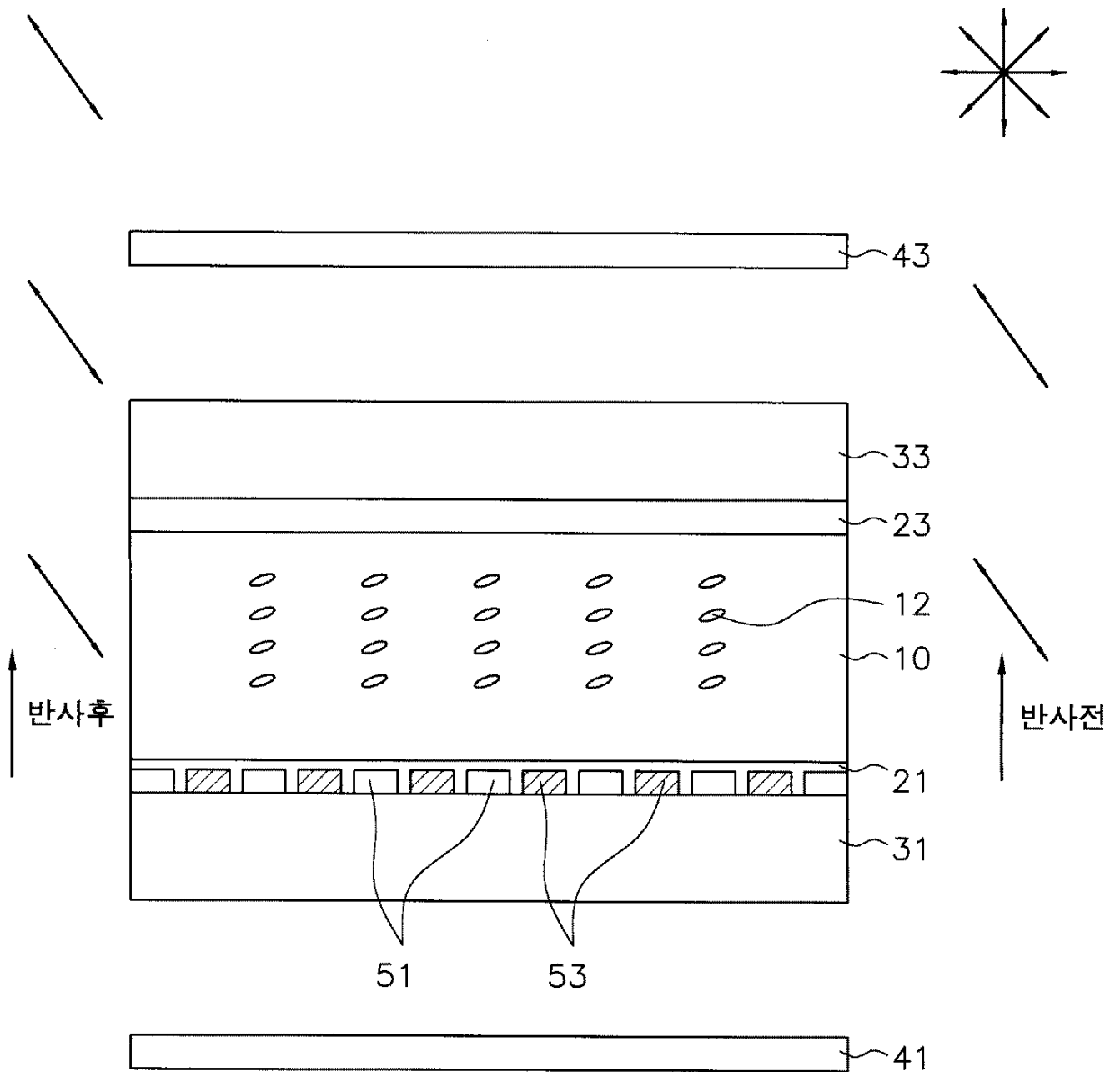
4a



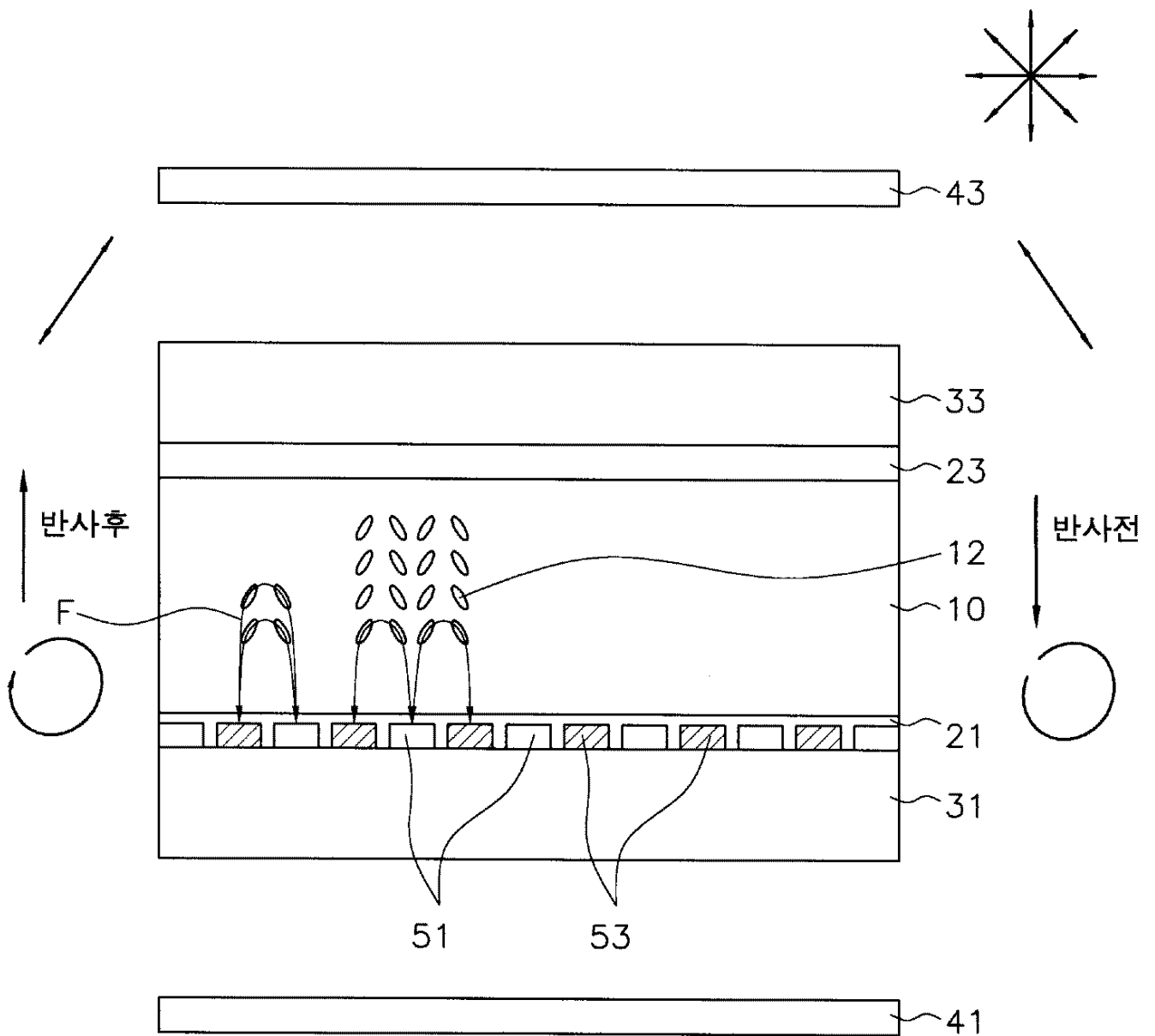
4b



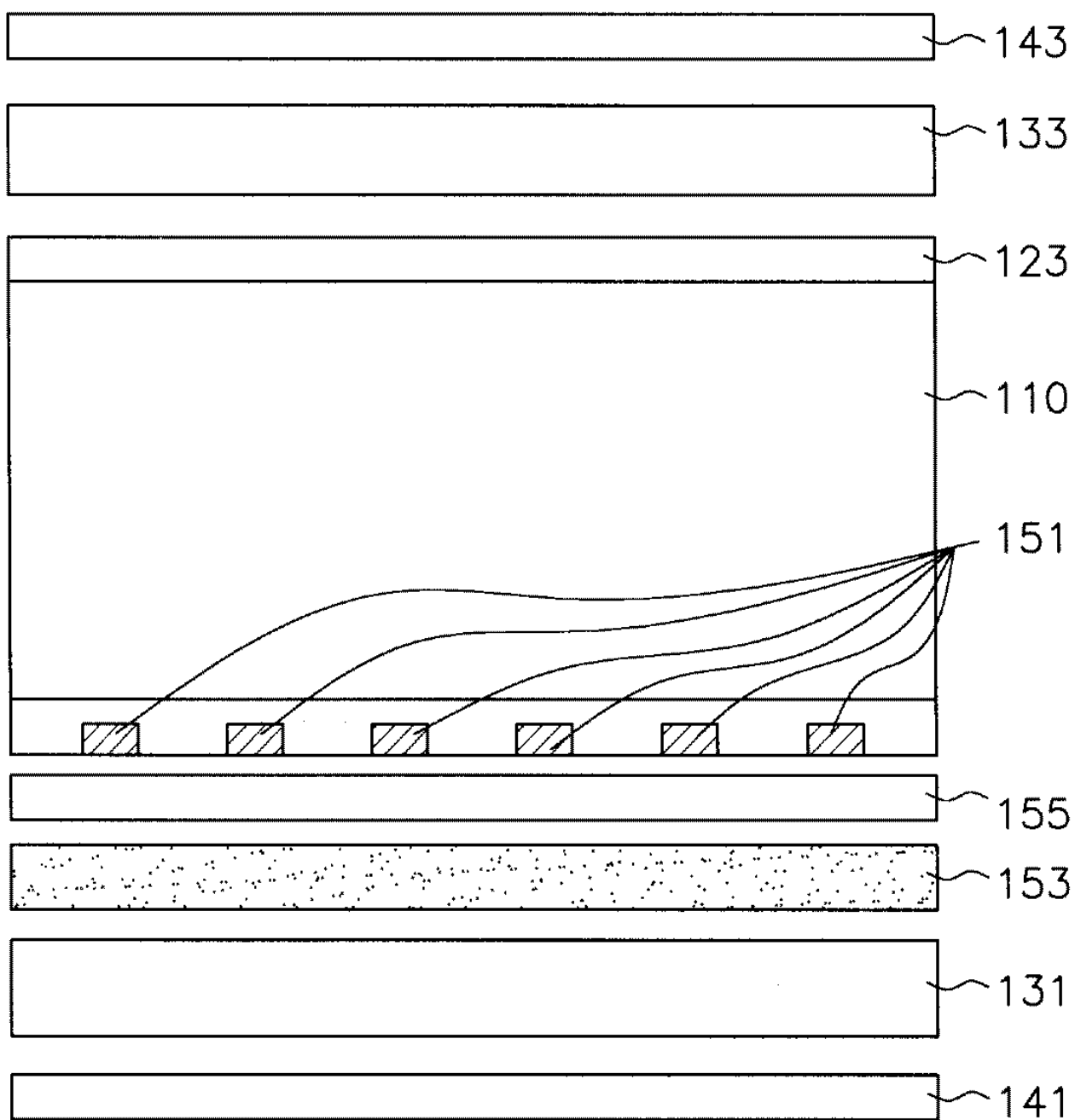
5a



5b



6



专利名称(译)	透反液晶显示器		
公开(公告)号	KR1020020002984A	公开(公告)日	2002-01-10
申请号	KR1020000037364	申请日	2000-06-30
[标]申请(专利权)人(译)	HYDIS TECH HYDIS技术有限公司		
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当前申请(专利权)人(译)	하이디스테크놀로지주식회사		
[标]发明人	HONG SEUNGHO 홍승호 KIM JINMAHN 김진만 LEE SEUNGHEE 이승희		
发明人	홍승호 김진만 이승희		
IPC分类号	G02F1/133		
其他公开文献	KR100658062B1		
外部链接	Espacenet		

摘要(译)

用途：提供TFT-LCD（薄膜晶体管液晶显示器）以在反射模式下获得高透射率，高开口率，快速响应速度和宽视角特性，以及使用LCD而不考虑电源用于驱动背光灯。构成：一种TFT-LCD，包括：具有多个向列LC分子（12）的LC单元（10）；和在LC单元的两侧配置的输入取向层（21）和输出取向层（23）。透明材料的输入基板（31）和输出基板（33）在输入取向层和输出取向层之间配置有单元间隙（d）。在输入基板上形成有多对像素电极（51）和对电极（53）。偏振器（41）和检偏器（43）分别与输入基板和输出基板相对。像素电极和对电极由不透明的反射材料制成，例如厚度为500-5000埃的Ag，Al，AlNd或Cu。反射器位于像素电极和对电极之间，并且被粗糙化以促进束散射。当高于阈值的电压馈入电极（51,53）时，在LC单元中形成边缘场。向列型LC分子的平行排列方向发生了变化。LC单元具有 $(2n + 1) \lambda / 2 - (2n + 1) \lambda / 4$ 的延迟。此处， λ 为光束的波长，n为0或正常数。

