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(12) (A)

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G02F 1/1337 (43) 2003 07 07

(21) 10-2001-0088478
(22) 2001 12 29

(71) . 20

(72) 87-46

(74) :

(54)

N(Low Twisted Nematic) PI TN(Twisted Nematic) ECB(Electrically Controlled Birefringence) , LT
, 1 2 , 1 2 , 1
, 2 , 1 , 1
2 , 2 , , 1 .

5a

, , , , , ,

1a .
1b .
1c , .
2 .

3a, 4a, 5a, 6a 7a .

3b, 4b, 5b, 6b 7b .

3c, 4c, 5c, 6c 7c ,

8a 8e PI .

9a 9c .

*

300 : 1 301 :

302 : 303 :

304 : 305 :

306 : 306a :

307 : 308 : 1

309 : 310 : 2

311 : 1 312, 315, 318 : ECB

313 : TN 314, 316, 317 : LTN

350 : 2 351 :

352 : 353 :

354 : 2 300a, 350a :

(PDA)

(Mobile PC)

가

가

, CRT , LCD , 가
(motion blurring effect) . 가
ane Switching), MVA(Multi-Domain Vertical Alignment), IPS(In-PI
nced Super-V) . ASV(Adva

,
1a , 1b
1c ,

1a
가 ECB ,
(100a) 1 (100) (101) (101)
(102) , (101) (102) ((103)
(103) (104) , (104)
(105) (106) (106) (102)
(106) (107) (106) (106a)
(107) 1 (108) 1
(108) (109) , 2 (110) (109) PI 1 (107)
(109) , 2 (111)

, (150a) 2 (150) (151) (152)가
(152) (153) , (153) 1 PI 2
(154)
TFT C/F , ECB (112)

, 가 가
,
1b , C/F TFT
(θ) ()
ECB θ 0° ,
1c , 1c ,
ECB 45° (β) ,

,
,
,
,
가
,
,
,

1 2 , 1 , 1 2 , 1 ,
 , 1 2 ,
 ,
 ,
 2
 (φ) , (, θ)
 2 , 1 (201) 2 (202) 가 (Θ)
 ,
 ,
 $0^\circ \leq \Theta < \pi/2$, $\Theta = \pi/2$
 $0^\circ < \Theta < \pi/2$ LTN(Low Twisted Nematic) , $\Theta = 0^\circ$ ECB(Electrically Controlled Birefringence)
 $\Theta = \pi/2$ TN(Twisted Nematic)
 c) ,
 $0^\circ < \Theta < \pi/2$ LTN(Low Twisted Nematic)
 $\Theta = 0^\circ$ ECB(Electrically Controlled Birefringence)
 ,
 $2 \sim 3^\circ$,
 $86 \sim 89^\circ$,
 3a, 3b, 3c 1
 3a 1
 ECB , TN
 ,
 (300a) 1 (300) (301) (301)
 (302) , (301) (302) ((303) (304) , (304)
 (305) (306) (307) (306) (306) (302)
 (306) (307) (306) (306a) 1
 (307) 1 (308) (307) 1
 (308) (309) , 2 (310) (309) PI 1 (307) (311)
 (309) 2
 ,
 (350a) 2 (350) (351) (352)가
 (352) (353) , (353) 1 PI 2
 (354)
 TFT C/F , ECB (312) TN (313)
 ,
 , 가 가 가 TN 가 ECB
 ,

3b, TFT 1, C/F $\Theta = 0^\circ$ E
CB 가 $\Theta = \pi/2$ TN 가

3c 1, 3c, ECB 45° (β)
TN 0° (β)

4a, 4b, 4c 2

4a 2 LTN, 1 TN, TFT
C/F, LTN (314) TN (313)

가 가 TN 가 LTN 가

4b, TFT 2, C/F $0^\circ < \theta < \pi/2$ LTN
가 $\Theta = \pi/2$ TN 가 θ

4c 2, 4c, LTN 0° (β) (β)
 $\beta = 1/2(\pi/2 - \theta)$ TN

5a, 5b, 5c 3

5a 3 ECB, 1 TN, TFT, C/F
ECB (315) TN (313)

가 가 가 TN 가 ECB

5b, TFT 3, C/F $\Theta = 0^\circ$ E
CB 가 $\Theta = \pi/2$ TN 가 θ

5c 3, 5c, ECB 45° (β)
TN 0° (β)

6a, 6b, 6c 4

6a 4 LTN , TN TFT
 C/F , LTN (316) TN (313) ,
 , 가 가 가 TN 가 LTN

6b , 4 C/F
 , TFT $0^\circ < \theta < \pi/2$ LTN
 , 가 $\Theta = \pi/2$ TN 가 θ

6c 4 6c , LTN (β)
 $\beta = 1/2(\pi/2 - \theta)$, TN 0° (β) ,

7a, 7b, 7c 5

7a 5 LTN , ECB TFT
 C/F , LTN (317) ECB (318) ,
 , 가 가 ECB 가 LTN

7b , 5 C/F
 , TFT $0^\circ < \theta < \pi/2$ LTN
 , 가 $\Theta = 0^\circ$ ECB 가 θ

7c 5 7c , LTN (β)
 $\beta = 1/2(\pi/2 - \theta)$, ECB 45° (β) ,
 , PI UV

8a 8e PI . PI 가

8a , (400) PI() (401) UV PI PR(
 , 402) , PR (410)

8b , (410) (410) PR(402a)
 PR , , PR (410) PR
 (402a) ,

8c , PI (411) PI PR(412)
 PR(412) (410) ,

8d , (410) , , PR (412a) .
 , 8e , PI PR PI (401, 411) .
 , PI .
9a 9c .
9a , (500) (501) (510) . ,
(510) (510) UV .
9b , (510) 가 UV .
9c , (510) .
 , 가 .
 , ECB 가 LTN TN 가 .
 , LTN , ECB .
가 .
 , 가 .
 , 가 TN 가 .
 , LTN , ECB 가 .
 , 가 ECB 가 .
LTN , , 가 가 ECB 가 .
가 .

(57)

1.

1 2 ,

1 2 ,

1 ,

1 ,

2 ,

1 2

.

- 1

2.

, .
- 1

3.

, PI .
- 1

4.

, TN , ECB .
- 4

5.

, , .
- 4

6.

, , .
- 1

7.

, TN , LTN .
- 7

8.

, , .
- 7

9.

, , .
- 1

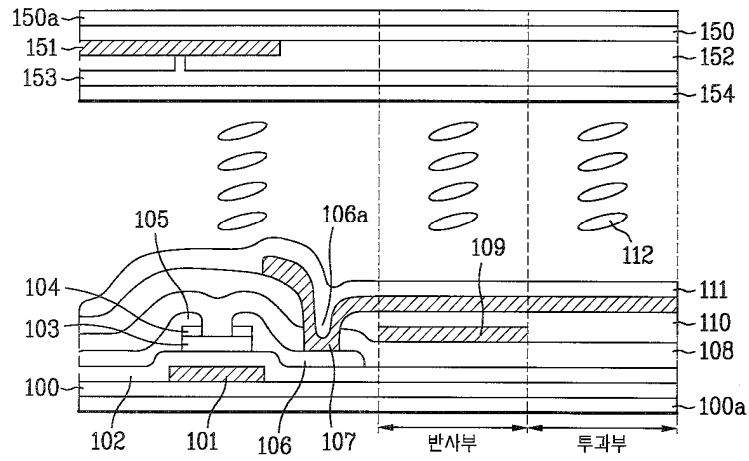
10.

, ECB , LTN .
- 10

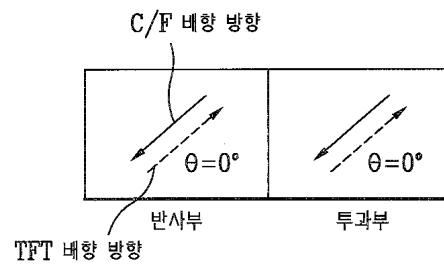
11.

, ECB ± 45 ° .

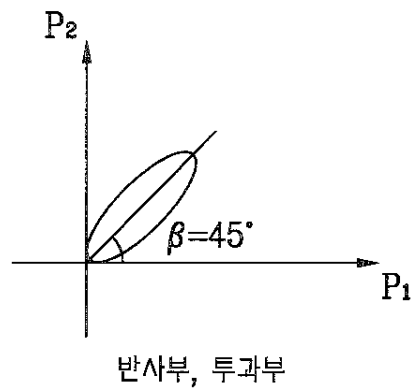
1a



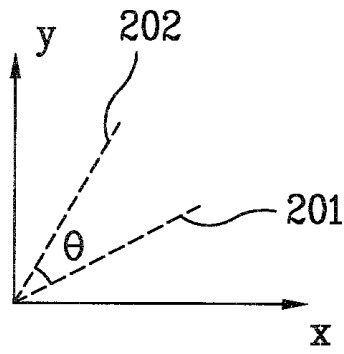
1b



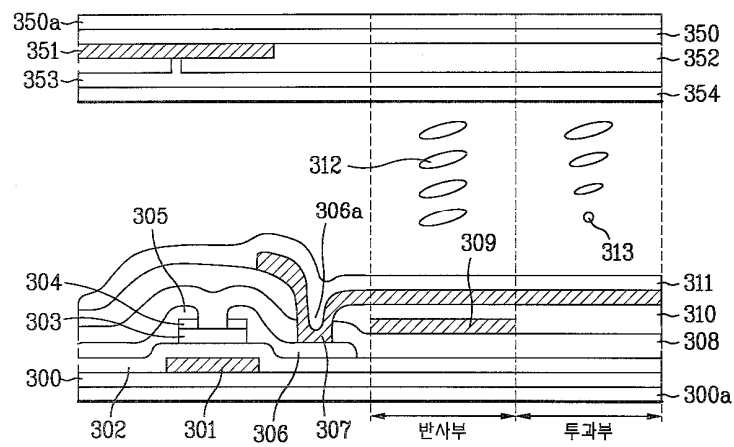
1c



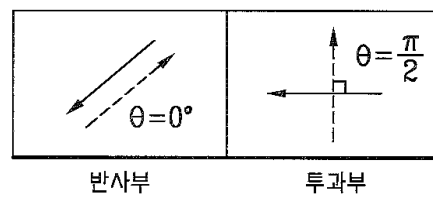
2



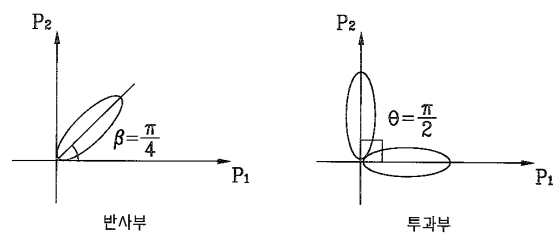
3a



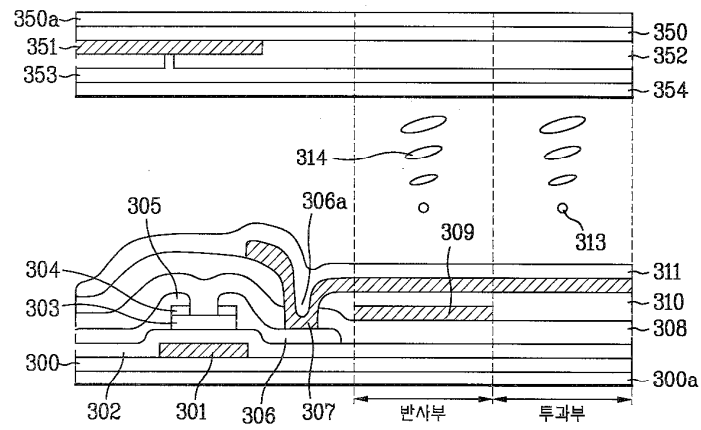
3b



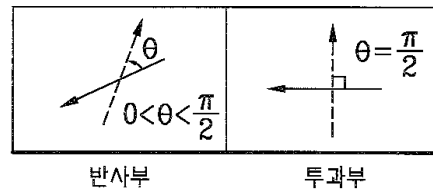
3c



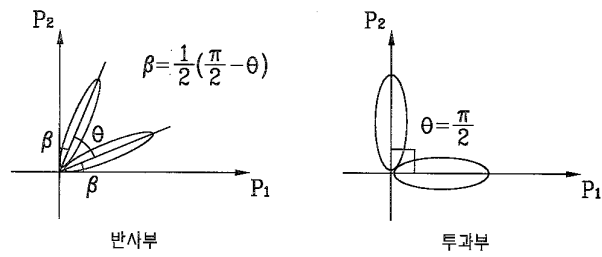
4a



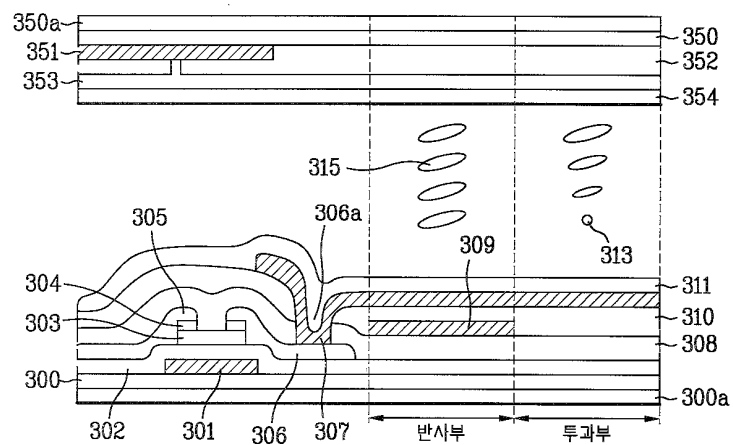
4b



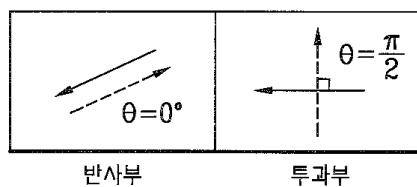
4c



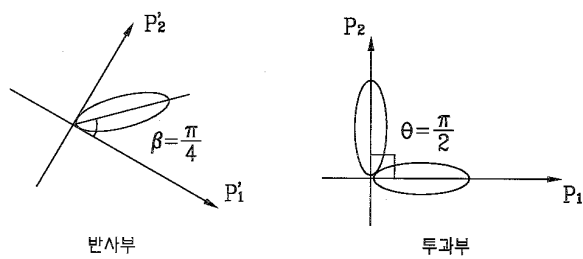
5a



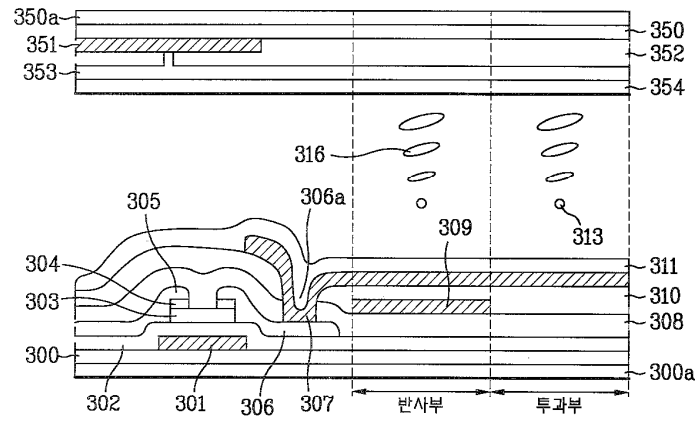
5b



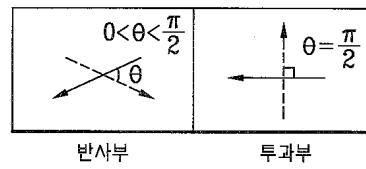
5c



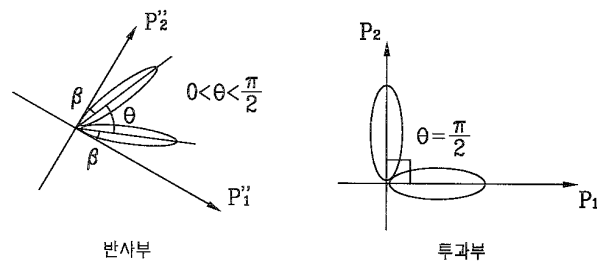
6a



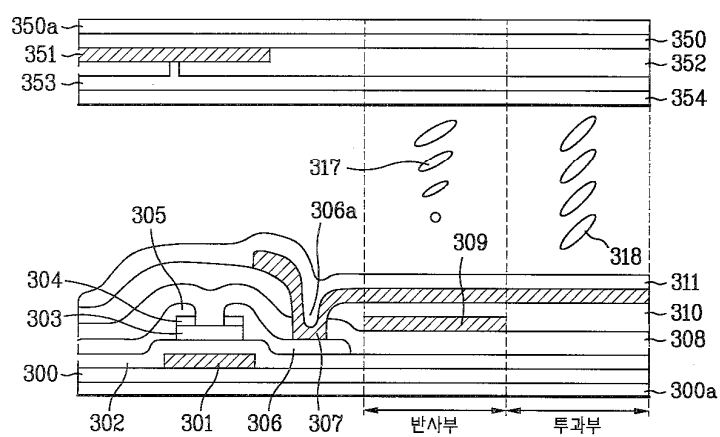
6b



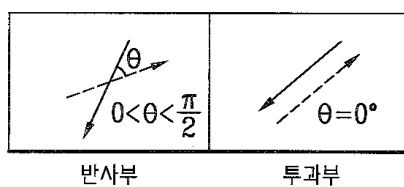
6c



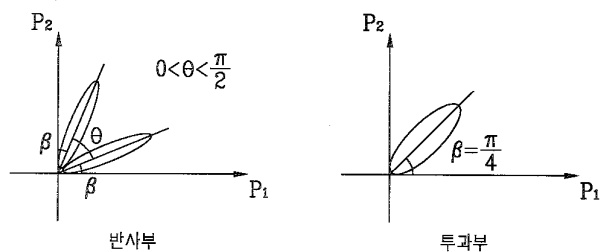
7a



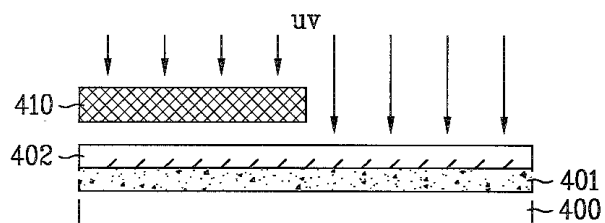
7b



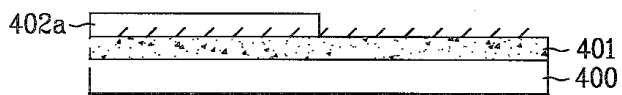
7c



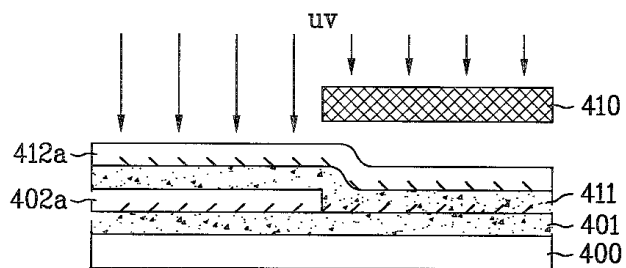
8a



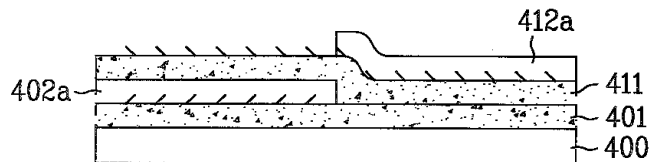
8b



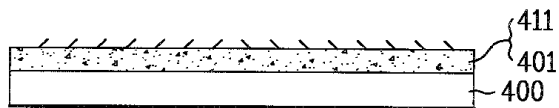
8c



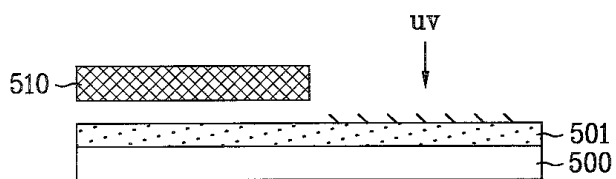
8d



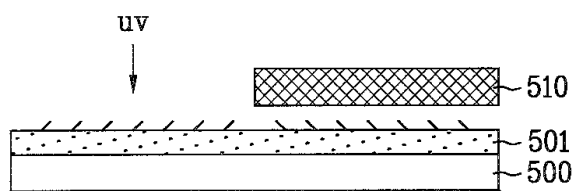
8e



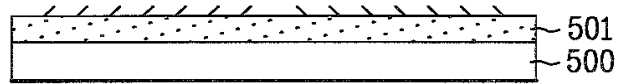
9a



9b



9c



专利名称(译)	透反液晶显示元件		
公开(公告)号	KR1020030058092A	公开(公告)日	2003-07-07
申请号	KR1020010088478	申请日	2001-12-29
[标]申请(专利权)人(译)	乐金显示有限公司		
申请(专利权)人(译)	LG显示器有限公司		
当前申请(专利权)人(译)	LG显示器有限公司		
[标]发明人	LEE MANHOAN 이만환		
发明人	이만환		
IPC分类号	G02F1/1337		
CPC分类号	G02F1/133528 G02F1/133753 G02F1/133784 G02F1/133788 G02F1/1393 G02F1/1396		
代理人(译)	金勇 新昌		
外部链接	Espacenet		

摘要(译)

用途：提供半透射液晶显示装置，在水平和垂直对准的情况下形成多畴，以改善宽视角和亮度。组成：一种半透射型液晶显示器件，包括彼此相对的第一和第二基板（300,350），形成在基板外表面上的偏振板（300a，350a），反射部件和在第一基板的像素中形成的透射部件，第一取向膜（311）形成在第一基板上，在反射部分和透射部分上具有不同的取向方向，第二取向膜（354）形成在第二基板上，在对应于反射部分的部分上具有不同的取向方向透射部分和在基板之间形成的液晶层。

