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10-2004-0006087
2004 01 24

(21)

10-2002-0039609

(22)

2002 07 09

(71)

.

20

(72)

3 1049-1

401

(74)

:

(54)

(CLC color filter)

(left handed pitch) 가 2

2 , 2

(right handed pitch) 가 1

1 , 1

3 , 1

4

1,2,3,4

4

1

2

3 2

4 1

5	1	2
,		
6	4	
7		2
8		3
9		4
10	9	

<
>

102 : 104 :

106 : CLC 108 :

110 : 112 : ,

114 : 1 CLC 116 : 2 CLC

('CLC ') , ('CLC ')

, 가 , 가 가

, 가 ,

Active Matrix LCD : AM-LCD)가

1

(11) (6) (, ,) (7) ,

(18) (5) , (P) (17)

(T) (22) , (5) (22)

(14) .

(22) , (T)가 (matrix type)

, 가 (13) (15) .

(P) (17) - - (13) (15) (P)

(indium-tin-oxide : ITO)

(11) (back light)(3

0)가

(17) 가 , 가 가 , (T) 가 가 , 가

(17) 가 가 .

(11) (30) , (30)

(8) ,

2 () ,

(8) .

() (30) , (30)

(30)

가 가 .

(8)

(30) .

가 , 가 .

(Ch

olestERIC LC ; CLC) 가 / .

2 , ,

2 .

CLC CLC (50) 1 (52) , 1

(52) CLC (54) (58) 2 (58) , 2 (58)

(QWP : $\lambda/4$)(60) (linear pol.)(62) .

1 (52) (64) (66)가 .

(54) (64) 가

가 . (, 가

.)

CLC (54)

(64) .

CLC (64) , CLC (56) .

(54) CLC (54) (red) (green) (blue) 가

3 2 3

(66) 가 ,

CLC (64) , CLC (66) () CLC (64)

(66) (66)

CLC (64)

(recycling) CLC (64)

CLC (64) CLC R,G,B

() 가 .)

CLC (54) 가

CLC (54) CLC (64) CLC

CLC (54)

CLC (54) (56) (60)

(62)

(recycling) 가

, CLC

가

1

2

가

가

;
 ; CLC ; CLC 1 ; 1 ;
 ; 가 1 CLC 2 ; 2
 2 CLC ; 2 CLC 1 CLC 가 1 CLC
 ,
 , 1 ,
 CLC 가 , 1 CLC
 ,
 1 CLC ,
 , $\lambda/4$, 가 $\lambda/4$.
 1 ; 1 ; 1 ,
 ; 2 CLC ; 2 CLC 가 1 CLC 2 ; 2
 ; 2 CLC , 1 CLC 가 1 CLC 2 CLC
 1 ,
 CLC 가 , 1 CLC
 ,
 1 CLC , ,
 ,
 -- 1 --
 1 CLC 가 CLC
 ,
 4 1 .
 (104) , CLC 1 (106) (108) , (100) 1 (102) 2
 P)(110) (linear polarizer)(112) 1 (102) (QW
 2 (104) 1 CLC (114) 2 CLC (116) .
 2 CLC (116) (118) .

2 CLC (118) , , 가 ,
 (116) (Left or Right handed pitch) 가
 .
 1 CLC (114) (118) , , 가
 가 (Right or Left handed pitch) 가 .
 , 1 CLC (114) 가 가 가
 , 가 .
 CLC , 1 CLC (114) 2 CLC (118) 가 ,
 (106) 1 CLC (114) 가 .
 , 5 , 1 CLC 2 CLC
 5 1 2
 .
 가 , (118) , , ($\lambda_R, \lambda_G, \lambda_B$)
 , .
 (118) 2 CLC (116) 가
 (118) 가 .
 , (118) 50% 가 .
 , 2 CLC (116) (118)
 2 CLC (116) .
 2 ?? (116) 1 CLC (114) (118) , ,
 가 .
 , (118)
 .
 , 1 CLC (114) (150)
 (118) 2 CLC (116) 1 CLC (114)
 .
 , 가 CLC , (118) , ,
 가
 , 1 2 CLC .
 6 가 1 CLC 2 CLC ,
 6 4 .
 116) , (118) , , 가 2 CLC (,
 , 2 CLC (116) (118)
 2 CLC (116) .
 1 CLC 2 CLC (116)
 (114) .

, CLC
 116) 1 CLC (114) 2 CLC (

1 CLC (114) , , CLC (106) (108)
 (110) (112) (112)

1 CLC (114) ,
 2 CLC (116) , ,

, 가

, , 2 4 가 가

-- 2 --

2 1 (diffuser)

7 2

2 (206) (208) , (200) 1 (202) 2 (204) CLC
 (214) (210) (QWP)(212)

2 (204) (Right handed pitch) 가 1 CLC (216) (Left
 handed pitch) 가 2 CLC (218)

1 CLC (216) 가 (Right handed pitch) 가 , 가 2 CLC (2
 18) 가

, 1 CLC 가 가 1 가 2 CLC
 , , CLC 가 2 CLC (

.)

2 CLC (218) (220)

1

, 1 CLC (216) 2 CLC (218) (208) (
 210)

, 가 (210)

, (210)

,

, 3 2

-- 3 --

3 2 ,

8 3 .

06) (308) (314) 1 (316) (300) 1 (302) (310) 2 (304) CLC (312) (3) (QWP)

2 (304) (Right handed pitch) 가 1 CLC (318) (Left handed pitch) 가 2 CLC (320)

20) 1 CLC 가 (318) (Right handed pitch) 가 , 가 2 CLC (3) 가

, 1 CLC (318) 가 가 1 가 2 CLC 가 CLC 2 CLC .(1 가 2 CLC 가 .)

2 CLC (320) (322) .

(310) 1 CLC (318) 2 CLC (320) (308) (312)

(contrast)

(314) , (312)

, .

, 4 1 CLC

-- 4 --

9 4 .

08) (QWP)(410) 1 (400) (412) 1 (402) (416) 2 (406) CLC (4) .

1 (402) (418) 2 (420) .

2 (406) (Right handed pitch) 가 1 CLC (422) (Left handed pitch) 가 2 CLC (424)

2 CLC (424) (426) .

3 , (416) CLC (408) (410) (412) ,

, 10 9 .

10 9 .

, (426) 2 CLC (424) 2 CLC (424) .

, 2 CLC (424) (426) (recycling)
 2 CLC (424) 2 CLC (424) .
 , 2 CLC (424) 1 CLC (422)
 2 CLC (424) 1 CLC (422) (422) .
 , 1 CLC (422) 1 CLC (422) .
 (410) 1 CLC (422) CLC (408) 1 (412)
 1 (412) 1 (412)
 1 (412) (416) (418) 2 (420)
 (418) .

가 1 CLC 2 CLC , , ,
 , 가 .

(57)

1.

;

;

1 ;

1 ;

CLC ;

CLC 2 ;

2 가 1 CLC ;

가 1 CLC 2 CLC ; , 1 CLC

2 CLC

2.

1 ,

,

3.

2 ,

1

4.

1

CLC

가

1 CLC

5.

1

6.

5

1 CLC

7.

1

 $\lambda/4$

가

 $\lambda/4$

8.

1

1

1

1

2

2

CLC

CLC

2

가

1 CLC

1 CLC

2 CLC

가

2 CLC

9.

8

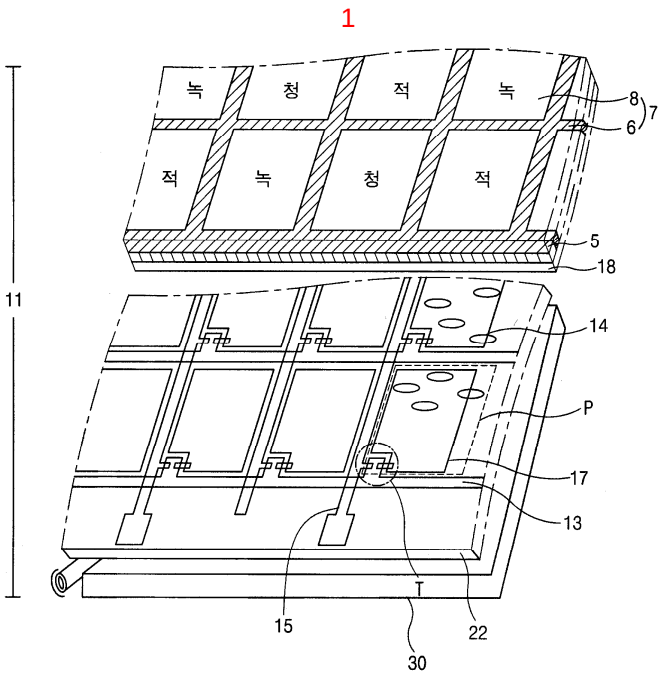
1

10.
8 ,
CLC , 1 CLC
가 .

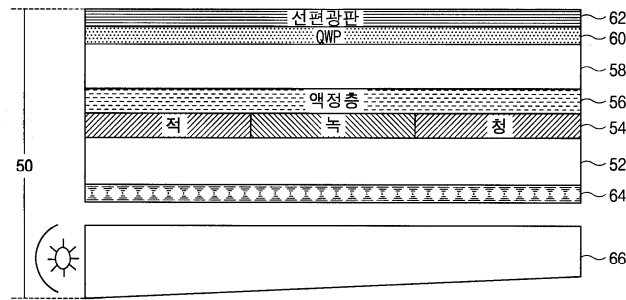
11.
8 ,

12.
11 ,
1 CLC , ,

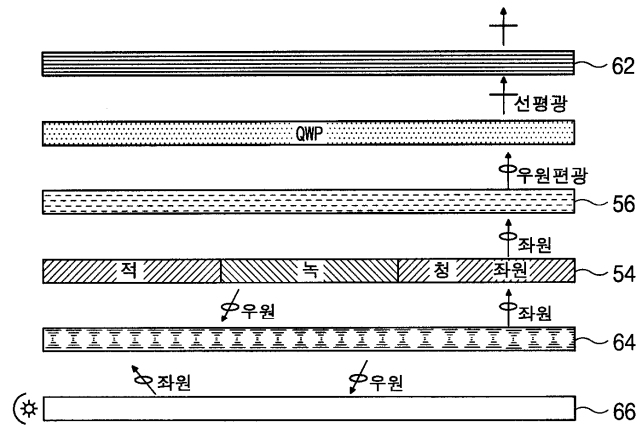
13.
8 ,
 $\lambda/4$ 가 $\lambda/4$,



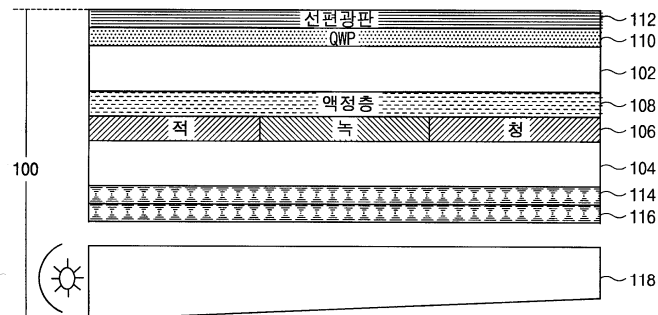
2



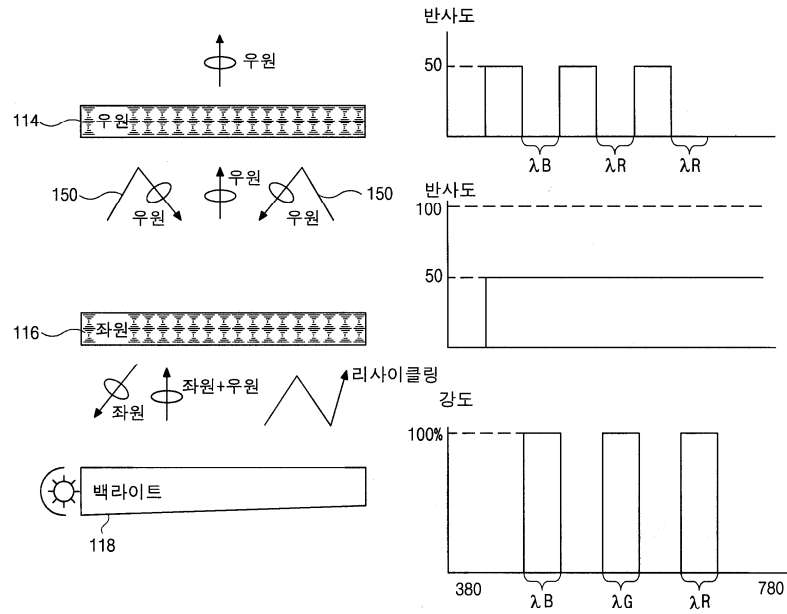
3



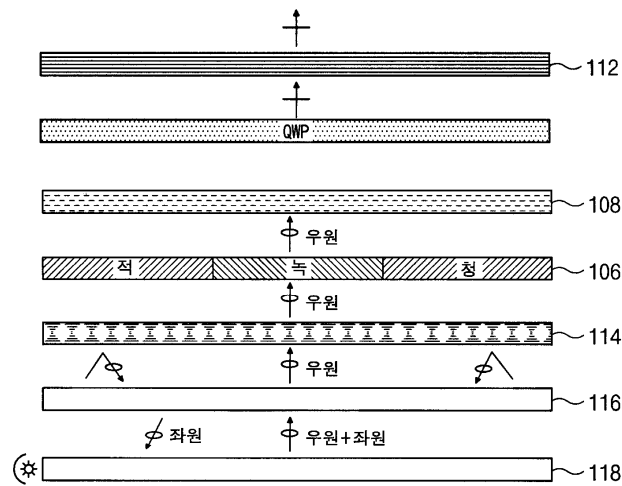
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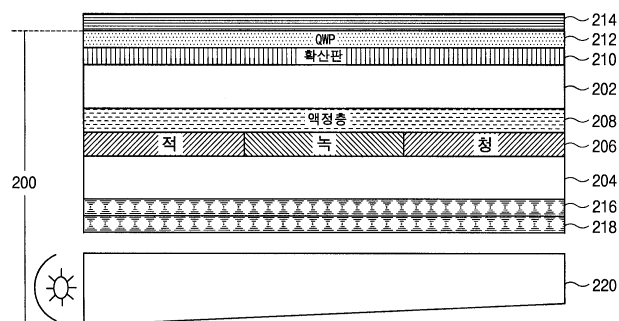
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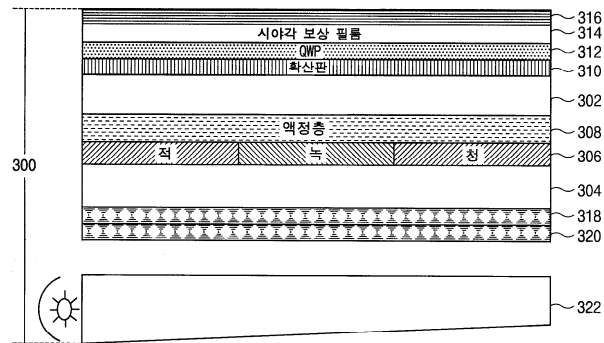
6



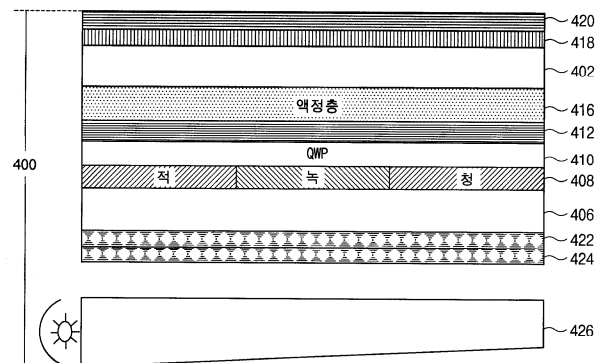
7



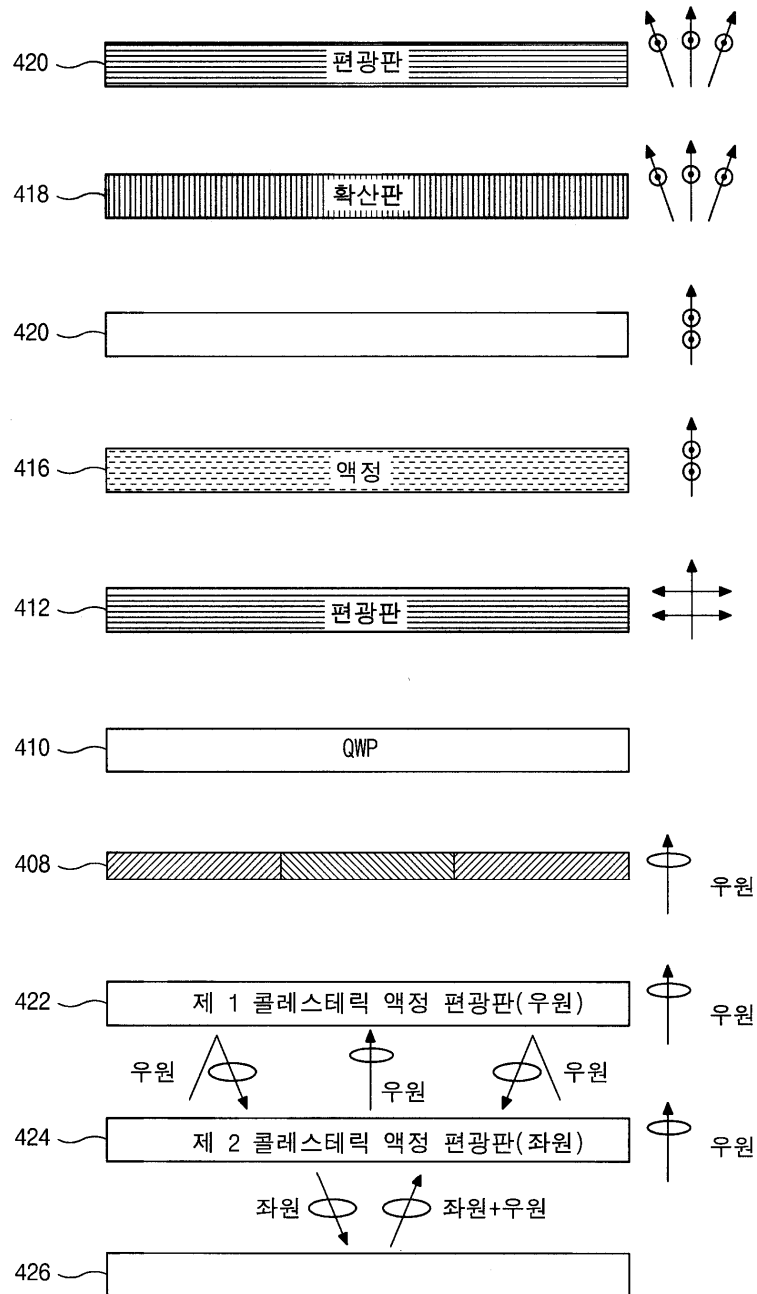
8



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专利名称(译)	一种液晶显示装置，包括胆甾型液晶滤色器和胆甾型液晶偏振片		
公开(公告)号	KR1020040006087A	公开(公告)日	2004-01-24
申请号	KR1020020039609	申请日	2002-07-09
[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		
[标]发明人	MOON JONGWEON 문종원		
发明人	문종원		
IPC分类号	G02F1/1333 G02F1/1335 G02F1/13357		
CPC分类号	G02F1/133514 G02F1/133533 G02F1/133536 G02F1/13362 G02F2001/133543		
其他公开文献	KR100883986B1		
外部链接	Espacenet		

摘要(译)

目的：提供胆甾型液晶滤色器和包括胆甾型液晶液晶偏振片的液晶显示器，以通过安装第一CLC偏振片和具有对应于红色峰值波长范围的间距的第二偏振片来提高聚光效率绿色和蓝色。透射彩色液晶显示器（100）由第一基板（102）和第二基板（104），CLC（胆甾型液晶）滤色器（106）和液晶层（108）形成在第一基板和第二基板之间。相位差膜（110）和线偏振器（112）安装在第一基板上。在第二基板上形成有第一CLC偏光板（114）和第二CLC偏光板（116）。背光（118）布置在第二CLC偏振片上。第一个CLC偏振板具有非连续的右手或左手间距，以凝结红色，绿色和蓝色的峰值波长范围。第一CLC偏振片在第二CLC偏振片的间距的相反方向上具有间距。彩色滤光片在第一个CLC偏光板的间距方向相反的方向上具有间距

