



(19)
(12)

(KR)
(B1)

(45)
(11)
(24)

2010 04 23
10-0954082
2010 04 14

(51)	Int. Cl.	(73)	
	G02F 1/1333 (2006 01)		
(21)	10-2003-0021877		416
(22)	2003 04 08	(72)	
	2008 03 07		
(65)	10-2004-0087471		1 101 100
(43)	2004 10 14	4	
(56)			643 505
	JP11326954 A*		
	JP07325319 A*		
	JP08179888 A		
	JP05056219 A	(74)	155-801
	*		

: 10

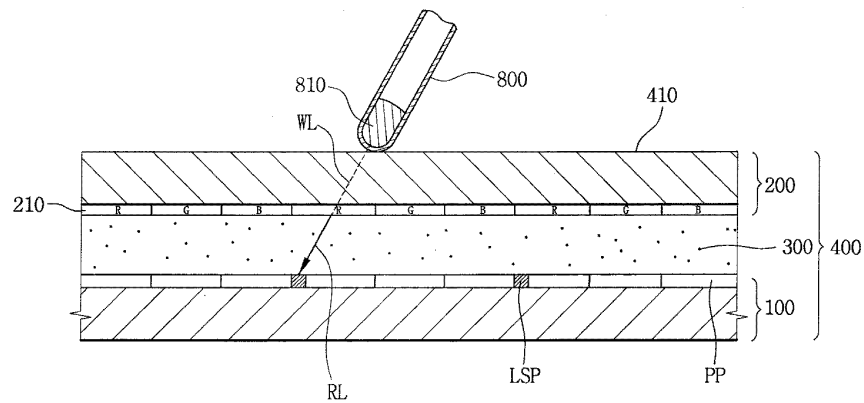
:

(54)

(57)

1 1 1 R 1 2 1 2

2 1 2 R R



1

1 R 1 ;

1 2 , 1

, R 1 R

2 ;

1 2 ,

, 1 ;

1 2 ;

1 , 1 2 ;

2 2 1 2

3 .

2

1 , R 600 ~ 700nm .

3

1 , G B .

4

5

6

1 , 2 1 ,

3

.

7

6 , 1

.

8

1 , 3 , 2

2

.

9

8 , 2

.

10

1 ;

1 , 600 ~ 700nm

2 ;

1 2 ,

,

1 ;

1 2 ;

1 , 1 2 ;

2 2 1 2

3 .

11

10 , 1 ,

R G B ;

12

11 , R ,

R .

[0017]

[0018]

[0019]

[0020]

[0021]

[0022]

1 , 1 2 , 1 2
1 2

- [0023] , 1 2 , 1 2 ,
 , .
- [0024] , .
- [0025] 1 , 2 1
2 .
- [0026] 1 1 R . 2 1
2 R
R .
- [0027] , , 1 , 2
1 2 .
- [0028] 2 1 , 600 ~ 700nm
 .
- [0029] , , 2 1 R
R . ,
 .
- [0030] , , .
- [0031] 1 , 2 1
 , 3 1 .
- [0032] 1 3 , (100),
(100) (200) (100) (200)
(300) (400) .
- [0033] (100) (PP)
(300) (410)
(LSP) .
- [0034] , (100) (LSP) (PP) (PP)
 , (LSP) (PP)
(100) (PP) (LSP) .
- [0035] , (LSP) (400) .
- [0036] 1 2 , (200) R(Red), G(Green), B(Blue)
(210) .
- [0037] R G , G B
 , B R , G B R (200)
 , G B R .
- [0038] (210) R (LSP) ,
(400) (410) (VL) R (RL)
(LSP) .
- [0039] , R (RL) 600 ~ 700 nm . (RL) 600 ~
660nm .
- [0040] , (VL) (400) (800)

- (800) (400) (410) (VL)
(Light Emitting Diode; , LED) (810) .
- [0041] LED(810) (VL) R (RL)
(LSP) , LED(810) (VL) , (VL)
R (RL) (LSP) .
- [0042] , LED(810) (VL) (RL) , LED(810)
600 ~ 700nm .
- [0043] 4 R G B . 4 d65
d65 6504K
(day light) .
- [0044] , R (spectrum) , G
, B .
- [0045] , 4 x (nm) , y (× 100%) .
- [0046] 4 , R G B 400 ~ 500nm , B
R G .
- [0047] , 500 ~ 600nm , G R B
.
- [0048] 600 ~ 700nm , R G B
.
- [0049] , R G B
, R 600 ~ 700nm 100%
.
- [0050] , R 600 ~ 700nm , R
.
- [0051] , (400) (410) (100)
(LSP) (LSP) (LSP)
(Photo Current) 1 .

1

[0052]

	R	G	B
	0.872nA	0.872nA	0.872nA
	10nA	14.9nA	14.9nA
LED	1250nA	99.4nA	55.9nA
LED	53.3nA	67.4nA	86.8nA
LED			10nA
	1410nA	105nA	10.9nA

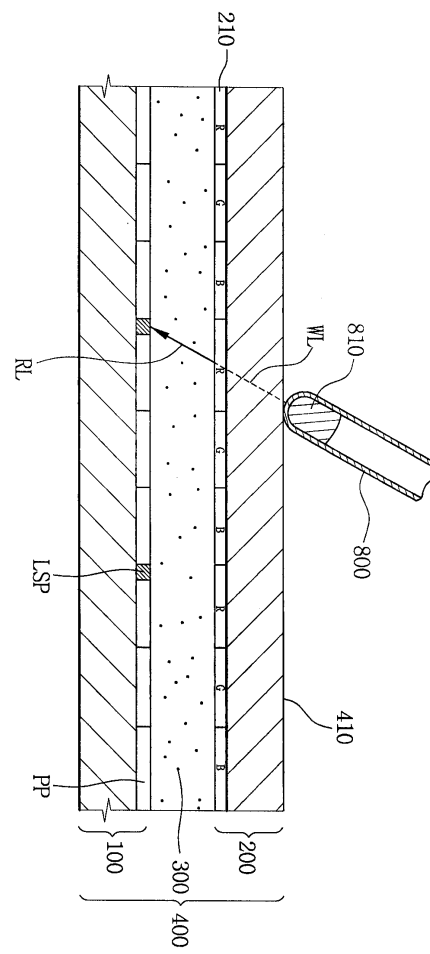
- [0053] 1 , LED (laser)
(LSP) , LED LED
LED 630nm .
- [0054] , (LSP) G B R
, (LSP) .
- [0055] , LED R
(LSP) .

- [0056] , LED , (LSP)
LED
- [0057] 1 , (400) (LSP)
LED , R
- [0058] , LED(810) , R
(LSP) , LED(810) R
(LSP) (LSP)
- [0059] 5 1 , 6 5
- [0060] 5 6 , (400) (100) , (100)
(200) (100) (200) (300)
- [0061] (200) R G B (210) (220)
(210) R (LSP) ,
(400) (410) (V) R (RL)
(LSP)
- [0062] (220) (IndiumTinOxide; , ITO)
(IndiumZincOxide; , IZO) , (210)
- [0063] , (100) (PP) (LSP)
- [0064] (PP) 1 (DL) (GL) , 1 (DL) 2
(D2) (DL) , (GL) (DL) 1
(ThinFilmTransistor; , TFT)(T1) 1 TFT(T1) (TE)
(RE)
- [0065] 1 TFT(T1) (GL) , (DL)
(TE) (RE)
1 TFT(T1) (Amorphoussilicon; a-si) TFT
- [0066] , (LSP) 1 (DL) 1 (SL1) , 2
(D2) 2 (SL2) , (400) R
(RL) 2 TFT(T2) 2 TFT(T2) 3 TFT(T3)
, 2 3 TFT(T2 T3) a-si TFT
- [0067] 2 TFT(T2) 1 (SL1) , (DL)
3 TFT(T3) 1 (SL1)
(GL) , (GL)
- [0068] 3 TFT(T3) (GL) , 2 TFT(T2)
2 (SL2) 2
(SL2) (DL) , (DL)
- [0069] (TE) 1 3 TFT(T1 ~ T3) 1 TFT(T1)
(CON) 1 TFT(T1) (TE)
ITO IZO
- [0070] , (RE) (TE) , (TE)
(W) 2 TFT(T2) (V) (RE)

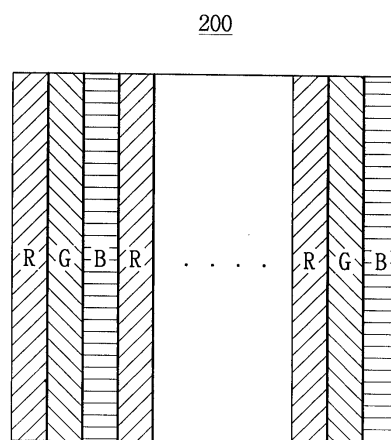
	(Al Nd)		(Al nd)	(MW)
[0071]	(W)	(400)	1	
	2	(400) (410)	(RE)	2
[0072]	(V)	2 TFT(T2)	(400)	
	TFT(T2)	(V) R	(RL)	2
[0073]	(RE)	1 3 TFT(T1, T3)	1 3 TFT(T1, T3)	
	(RL)			
[0074]	7 6			
[0075]	7	(PP) (GL), (DL),	(Cl c)	
	1 TFT(T1)	1 TFT(T1)		
[0076]	(LSP) 1 (SL1), 2 (SL2), 1	2	2	
	TFT(T2) 2 TFT	2	3 TFT(T3)	
[0077]			R	
	2 TFT(T2)			
[0078]	2 TFT(T2)	(DL)	2 TFT(T2)	1
	2 TFT(T2)		1	
		1 TFT(T1)		
[0079]	(GL)	2	3 TFT(T3)	2
	TFT(T2)	1	3 TFT	3
	TFT(T3)	2	1 TFT(T1)	
[0080]	(400)	(LSP)	(400)	
	(,)		(400)	
[0081]	R	R G B	R	
[0082]	R			
[0083]	R			
	TFT			
[0084]				

[illegible]

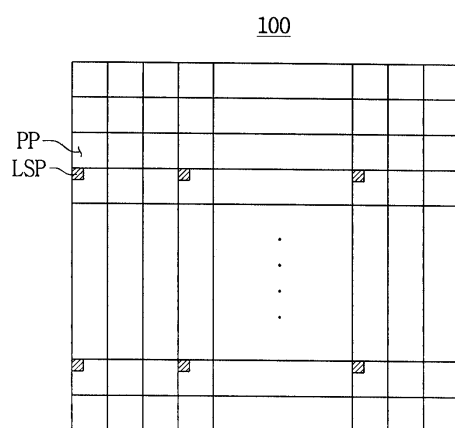
1



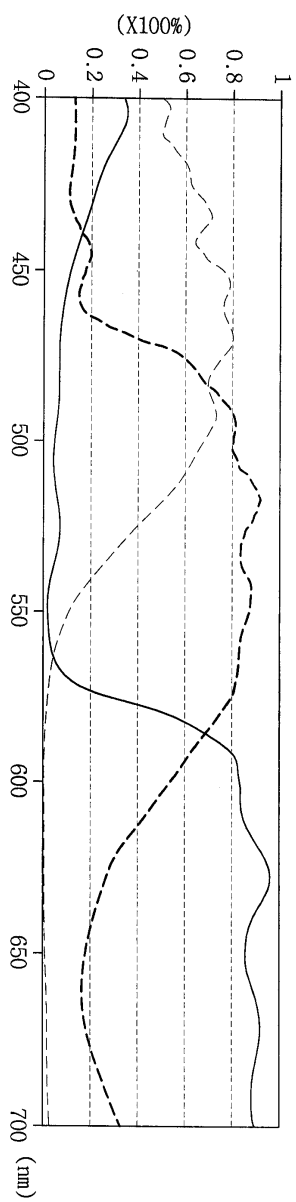
2



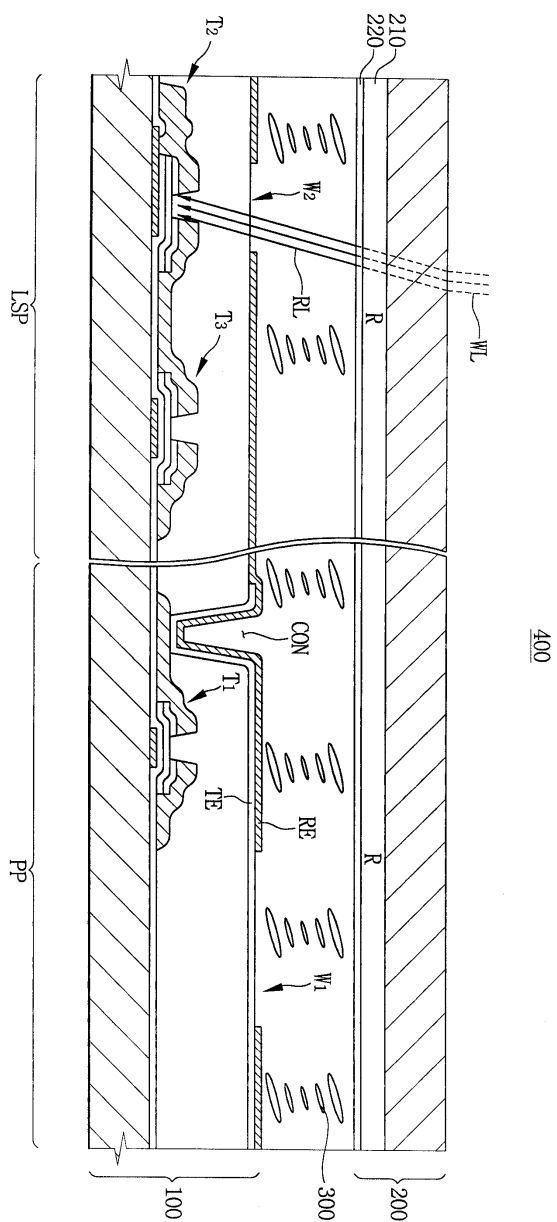
3



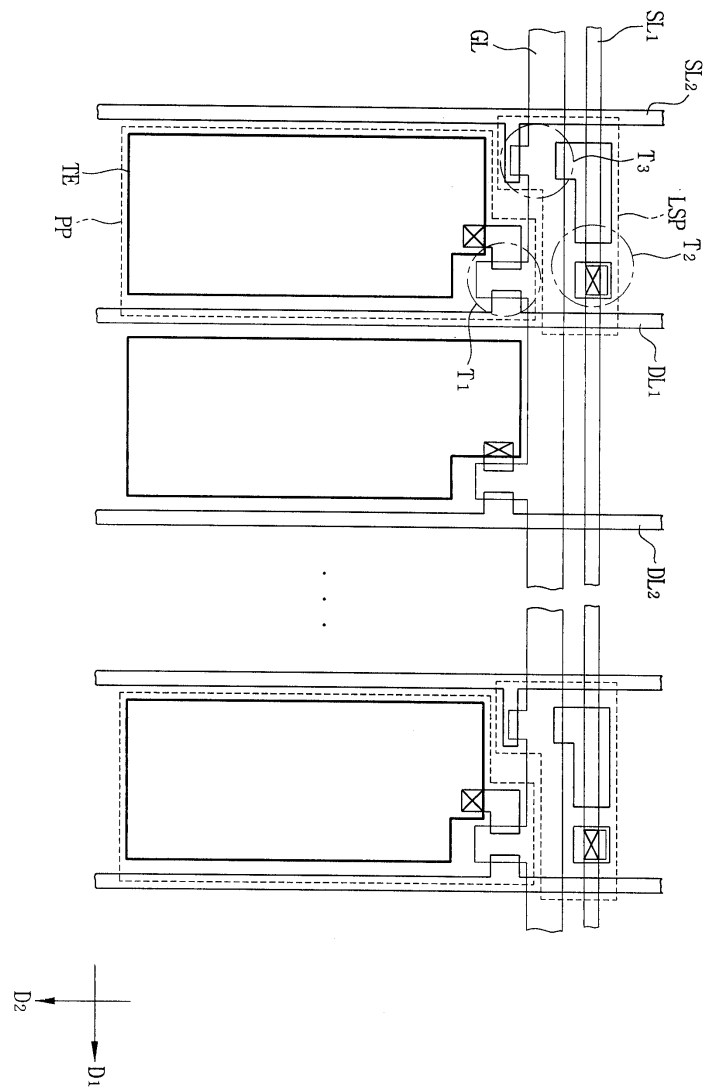
4



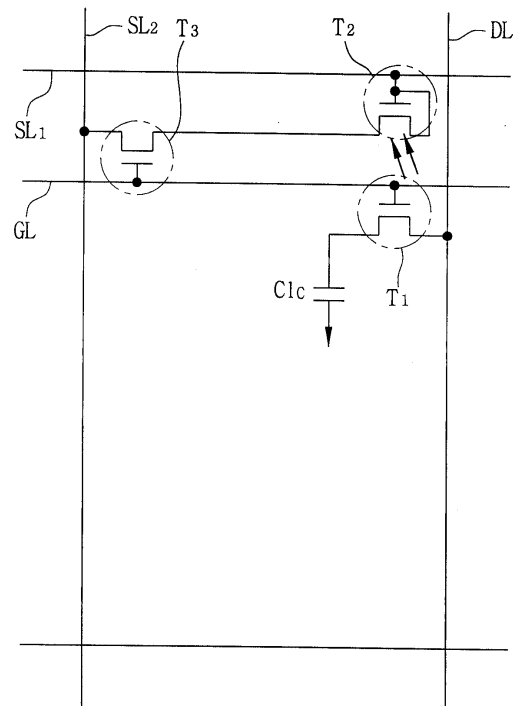
5



6



7



专利名称(译)	液晶显示器		
公开(公告)号	KR100954082B1	公开(公告)日	2010-04-23
申请号	KR1020030021877	申请日	2003-04-08
[标]申请(专利权)人(译)	三星电子株式会社		
申请(专利权)人(译)	三星电子有限公司		
当前申请(专利权)人(译)	三星电子有限公司		
[标]发明人	PARK SANGJIN 박상진 CHO JONGWHAN 조종환 UH KEEHAN 어기한		
发明人	박상진 조종환 어기한		
IPC分类号	G02F1/1333 G02F1/133 G02F1/1368 G09G3/36		
CPC分类号	G09G3/3648 G09G2360/14 G02F1/1368 G02F1/13338 G02F1/13318		
代理人(译)	PARK , YOUNG WOO		
其他公开文献	KR1020040087471A		
外部链接	Espacenet		

摘要(译)

公开了一种能够改善操作特性的液晶显示装置。液晶显示面板包括第一基板，第二基板和介于第一基板和第二基板之间的液晶层。第一基板具有公共电极和在第一表面上包括R颜色像素的滤色器。第二基板包括：多个像素部分，用于在面向第一表面的第二表面上显示图像；以及光感测部分，设置在R颜色像素下方，用于感测通过R颜色像素从外部入射的光它包括。因此，通过提高光感测部分的灵敏度，可以改善液晶显示装置的操作特性。

