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(43)

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(21) 10-2002-0002949  
(22) 2002 01 18

(71) 3 416

(72) 1547 506 202

932-2 803 102

101 203

2 7 702 104

(74)

:

(54)

ITO (PVA),  
a) , ; b) 1 4 , ,

ITO(Indium Tin Oxide)  
(overcoat)  
ITO (PVA) . , ,

1

, , , ITO

1 1 ,  
 2 1 ,  
 3 1 ,  
 4 1 ,

5 3 - '

[ ]

1: 2:

3: 4:

5: 6:

7: ITO(Indium Tin Oxide)

ITO(Indium Tin Oxide)

(PVA;Patterened Vertical Alignment)

가

가

(fringe field)

ITO

ITO

ITO

ITO

가

Cr

가  
(BM)

ITO

UV

ITO

, ITO , ,

ITO (PVA)

ITO (PVA)

a) ;

b) 1 4

, a) b) 3 : 1 3 : 2

6 , 가

1 ,

1 1 ,

1 1 2 ,

1 2 1 가

1 , 2 ,

(PVA)

1 2 ,

2 1 , ,

2 2 가 ,

1 가 2 1 2

(PVA)

## ITO(Indium Tin Oxide)

가

가

가

ITO

ITO

ITO

(3)  
(7)

1

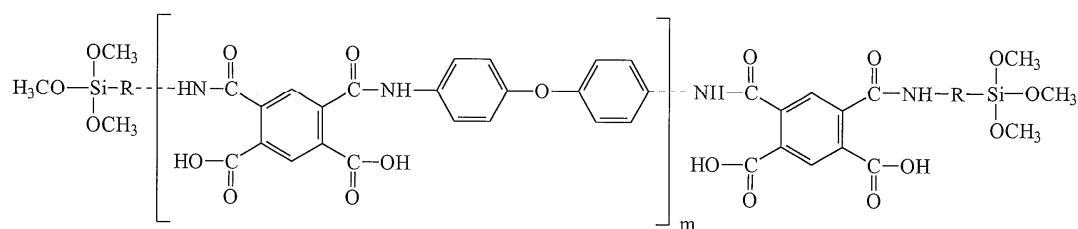
(4)

(1),  
(5),

(2),

(6) ITO(

[ 1 ]



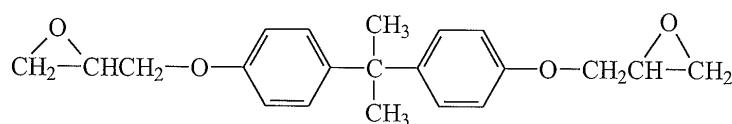
, R

1 4

; m 10 500

1 4  
2

[ 2 ]



3:1 3:2

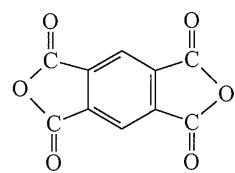
가

(bake)

3

가

[ 3 ]



가

가

■

1

1.0 3.0  $\mu\text{m}$

가

1  
3  
4  
5  
4  
-  
1

, 2 5 1  
 , (30) (10) 가 (20) (20) , , (1  
 30) 1 4 (31, 32, 33, 34) (35, 36) 가 가 , 2 (32) 3 1  
 (31) 1 (30) (31) 가 , 4 (34) 2 3 (3  
 (33) 2, 33) (31) (35, 36) 4 (34) (30, 31, 32, 33, 34, 35, 36) 1  
 (31) (20, 21) (40) (40) (5) (5  
 0) (40) , (21) (40) (61, 62) (50) (P) N (61, 62) (71) (72)  
 (61, 62) (71) (40) (72) (81) 가 (70) (80) (90) (90  
 (70, 71, 72) (81) (72) (80) (90) (90  
 (80) ITO(indium tin oxide) IZO(indium zinc oxide) (90)

, 4 5 , 1  
2 3 , , (900)  
1 , (11, 101) (10, 100)  
, 1 , 1 (90) (91, 92, 93)  
(10, 100)

(400) . 1 3 (410, 420, 430) 가  
 . (90) (20) (90) , 45 °  
 (70) (70) (20) (91, 92, 93) (91, 92, 93) (31, 32, 33, 34)  
 . , (91, 92, 93) (90) (30, 31, 32, 33, 34) (90) 3μm  
 . (20) (91, 92, 93) (30, 31, 32, 33, 34) (70) (70) (70) (20) (2)  
 0) 가

, (900) 가 (400) (91) (90) R, G, B  
 (310, 320, 330) , R, G, B (400) (400) (R) 가 R, G, B  
 (G ) , B (B ) 가 , R, G, B , G  
 (color shift)

[ ]

— 1 —

( )

가 × 가 730mm × 920mm 가 0.7 mm Cr ( ; 1737 ) Cr Cr

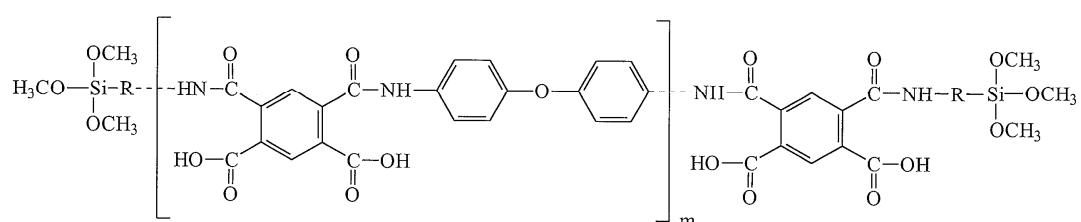
Cr (HKT601) 1.2 μm / 230μm × 60μm CAN( Cr  
 Cerium Ammonium Nitrate) 50 mJ/cm<sup>2</sup> 가 Cr ,  
 (M-R352) / / / (M-G302S)

(M-B342) (M-R352) / / / (M-G302S)

( 254nm ) UV (CT - 2000PPM) 230 40  
 가 1.5 μm 가 1a 2

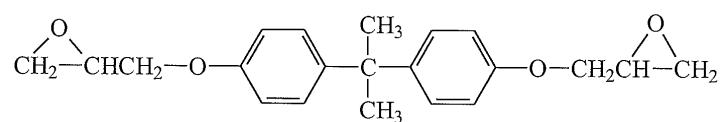
3:1

[ 1a ]



, R , m 50

[ 2 ]



90 ITO ( ) 100 1300 ITO ITO 240  
 ITO ITO ITO

JSR ( ) (NN-777) / / /  
 3.5  $\mu$ m PVA

1 3

1 ( : , 2 ( : JSR) ( : JSR), 1  
 3

1 1 3  
 1

1. :  
 (%) , 400 700 nm OSP-SP200 (C ) 450 nm ( ITO ) CIE

2. :

ITO 가 1% (White) CIE , 1 x, y 3% 가 0.002 , 0.002 0.005 , 0.005

3. :

ITO UV ( 1000 mJ/cm<sup>2</sup> , , 가 가 1% (White) CIE , 1 x, y 3% 가  
 (254 nm) , 3% 0.002 , 0.002 ~ 0.005 , 0.005

4. Cr ;

TFT 가 가 100 Cr BM BM JIS K-5400

5. ITO :

ITO g Time) 0 300%(25% ) 가 , ITO , 45 JET(Just Etchin (SE  
 M) (%) ITO ITO (CD) ( )

[ 1 ]								
		(%)		(%)		Cr	ITO	
		x	y	x	y		CD(μm)	† (%)
1	3:1					100	10.3	250
1	2					53	12.5	175
2	1					38	13.7	125
3						67	13.4	150

1 , 1 3 . , 1 , 1 1 3 175  
3 Cr 100% ITO .

ITO(Indium Tin Oxide)  
(overcoat)

ITO (active layer)

(PVA)

(57)

1.

a)

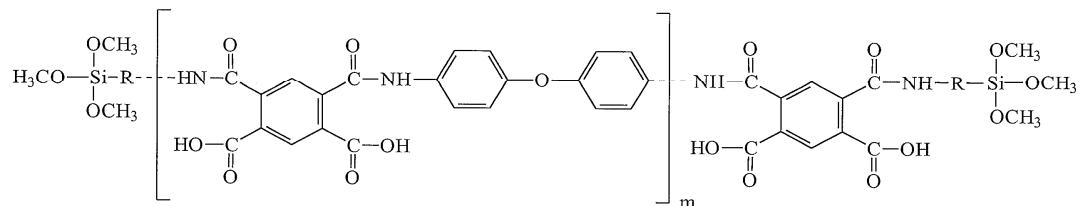
b) 1 4

2.

1 , a) b) 가 3 : 1 3 : 2

3. 1 , a) 1

[ 1 ]

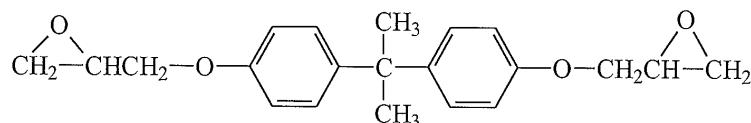


, R 1 4 ; m 10 500 .

**4.**

1 , b) 2  
:

[ 2 ]



**5.**

1 , .

**6.**

1 5 .

**7.**

6 , 가

1 ,

1 1 ,

1 1 2 ,

1 2 1 , 가

1 , 2 , , (PVA)

**8.**

6 , 가

1 2 ,

2 1 , ,

2 2 , 가 ,

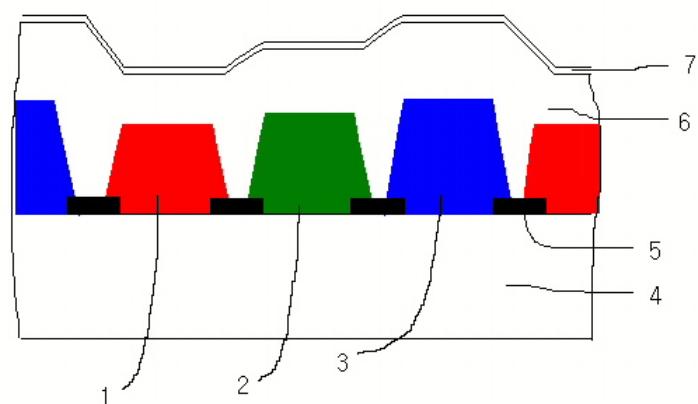
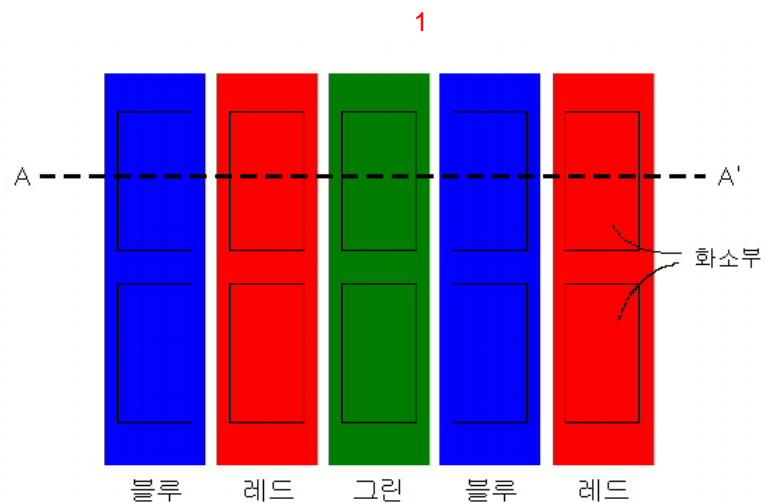
1 1 2 2 ,

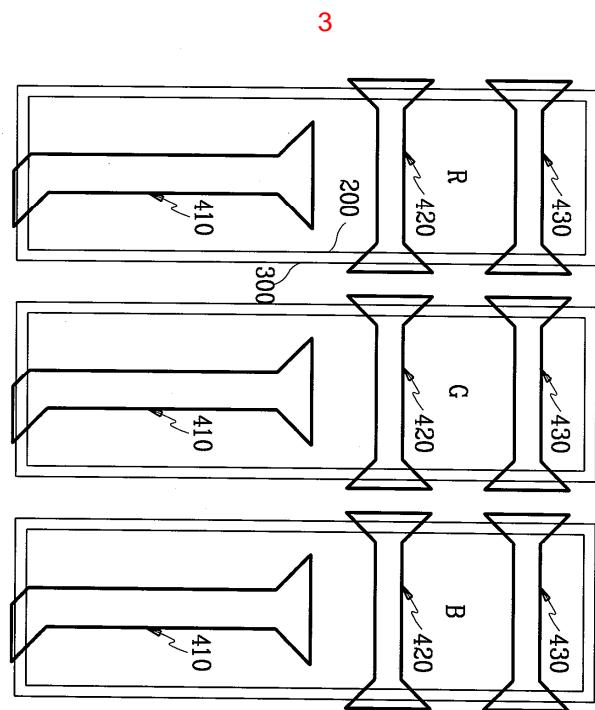
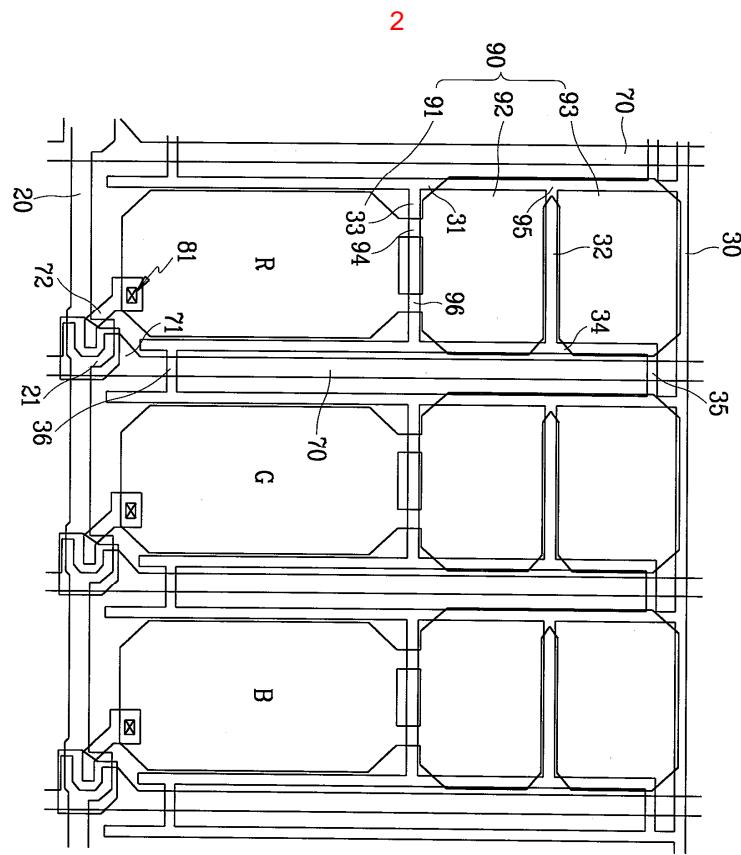
(PVA)

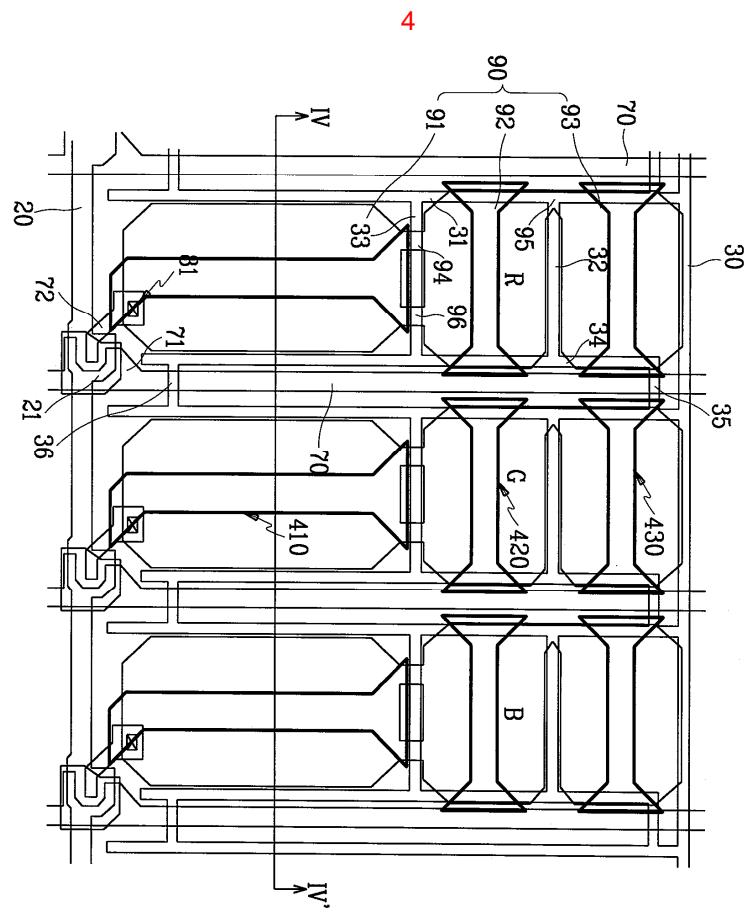
**9.**

8 , , , , 가 R , G , B

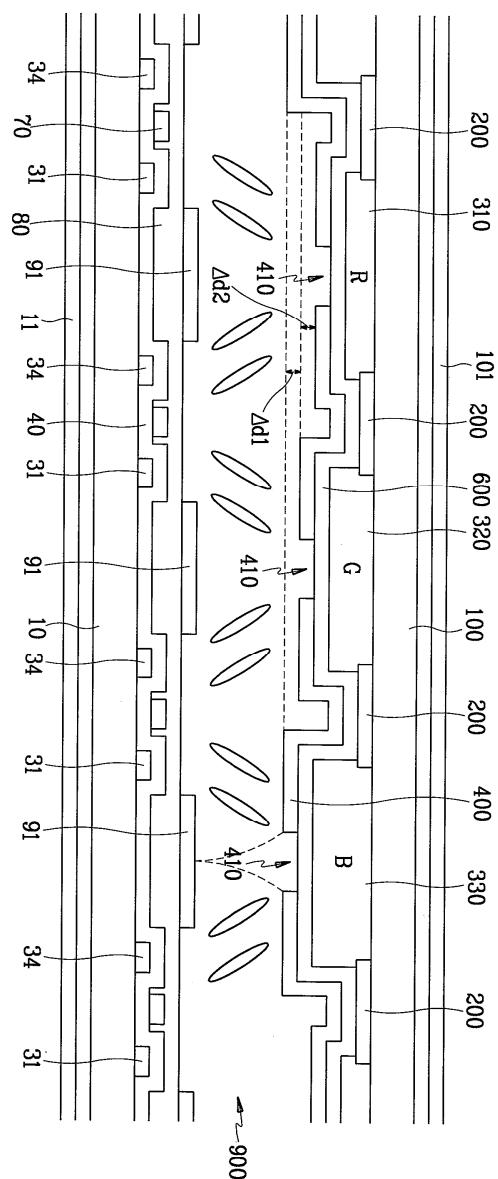
, B R G 가  
10. 6 가 ITO(Indium Tin Oxide)







5



专利名称(译)	用于液晶显示装置的滤色器和使用该滤色器的液晶显示装置		
公开(公告)号	<a href="#">KR1020030062634A</a>	公开(公告)日	2003-07-28
申请号	KR1020020002949	申请日	2002-01-18
[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	CHOI WOO 최우 KIM BYOUNGJOO 김병주 JI SEUNGRYOUNG 지승룡 HUH CHUL 허철		
发明人	최우 김병주 지승룡 허철		
IPC分类号	G02F1/139 G02B5/20 G02F1/1335 G03F7/00 G02F1/1333		
CPC分类号	G02F1/133371 G02F2001/133519 G03F7/0007 G02F1/133514 G02F1/1393 G02F1/133512 Y10T428/1045		
其他公开文献	KR100831232B1		
外部链接	<a href="#">Espacenet</a>		

#### 摘要(译)

本发明涉及用于ITO图案形成垂直取向(PVA)模式的液晶显示装置的滤色器和使用该滤色器的液晶显示器，更具体地涉及包括其中混合物的热固性膜的液晶显示器的滤色器环氧化合物的硬化和液晶显示器使用相同的聚酰胺酸和b)1具有透明外涂层，用于包括像素，黑色矩阵和透明的液晶显示器的滤色器外涂层是a)中的硅氧烷基团，末端为4个环氧基团。本发明的液晶显示器用滤色器提供ITO图案形成垂直取向(PVA)模式液晶显示器器件，其中ITO(氧化铟锡)的图案形成余量宽且耐热性好，即使在物理性能优异的情况下，在将其应用于液晶显示器的情况下，透光性也可以实现宽视角，并且透射率可以实现优异的透明外涂膜。透明外涂层，聚酰胺酸，环氧化合物，ITO图案。

