

(19)
(12)

(KR)
(A)

(51) 。 Int. Cl. ⁷ H05B 33/22	(11) (43)	10-2005-0010334 2005 01 27
(21)	10-2003-0049545	
(22)	2003 07 19	
(71)	575	
(72)	105 504	
	993-5204	
(74)		
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(54)		

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10: 1 11:

12: 2 13:

14: 20: TFT

21: 22:

23: 24:

25: 26:

30: EL 31: 1

32: 33: 2

40:

가 (voltage)가 . 가

가 , 가 , .

가 , Cr/CrOx
US 5,976,639

US 6,387,576

ITO IZO

가 가

USP 5,981,306

ITO IZO

가

EL

가

가 EL

2003-54798

/

가

EL EL

가

가

1 2 , 1

1 1 2 , 1 2 1

1 1 가 1 가 , 2 2 1

1 SiOx(x ≥ 1), SiNx(x ≥ 1), MgF₂, CaF₂, Al₂O₃, SnO₂

ITO(Indium tin Oxide), IZO(Indium Zinc Oxide), ZnO, In₂O₃

2 Fe,

Co, V, Ti, Al, Ag, Si, Ge, Y, Zn, Zr, W, Ta, Cu, Pt

Cr CrOx(x ≥ 1)

1 2

1 (sub-pixel) , AM
 (, 'TFT' : Ts) ,
 (, 'TFT') , (C) (

1 , 'EL' , 30) . TFT TFT TFT

TFT(Ts) (34) 가 (Scan) (35) 가
 (data) TFT(Td) TFT(Ts) (C)
 , (Vgs) EL (30) .

2 EL (30), TFT(Td) (C)

1 (10) 2 (12)

1 (10) 1 (31)

AM 2 , 1
 (10) TFT (20) , TFT (20) 1 (10) (11) , 1
 . TFT (20) 2 TFT TFT(Td) (C) , 1

TFT (20) TFT(Td) 2 (11) (21) ,
 (23) (21) (22) , (23) (21)
 (25) (26) (24) , (24) (27)(28) (C)

N P (21)

(21) SiO₂ (22) , (22) (23) (30)
 MoW, Al/Cu (31) TFT / (21) (23)

(23) (inter-insulator: 24) , (25)
 (26) (21) (25) 1
 (36) EL (30) (21) EL (30) 가 , (26)
 C) TFT(Td) (27) TFT(Td) (36) TFT(Ts) (

(C) 1 2 , TFT(Ts) TFT(Td)
 TFT(Td) (27) , (36) (28) (27) (28)
 , TFT (24) (C)

가 ,

1 TFT (20) (25)(26) TFT (C)

0) , TFT (20) (25)(26) , SiO₂ (4)
 (13) (13) , EL (30)
 1 (31) (40) (26)

EL (30) TFT(Td) (26) 1 (31) 2 (33) (31) 2 (33) (32) 1 (31) (32) (hole) (33) 2 (33) (32) (electron) (exiton) 가 (31) 2 (33) 2 (33) 1 (31) 가 2 (14a) 1 (31) (14) (14) (32) 2 (33) (32) (33) (HIL: Hole Injection Layer), (HTL: Hole Transport Layer), (EML: Emission Layer), (ETL: Electron Transport Layer), (EIL: Electron Injection Layer) (CuPc: copper phthalocyanine), N,N'-1,4-bis(4-phenylphenyl)-N,N'-diphenylbenzidine: NPB, (tris-8-hydroxyquinoline aluminum)(Alq3) (PEDOT) (HTL) (EML) 가 (Polyfluorene) ITO 가 1 (31) ITO 가 2 (12) (10) (32) 1 (10) 1 (31) ITO IZO Al, Ni, Cr Pt 가 Al, Ca, Mo ITO 2 (33) 2 (33) 2 (12) (40) (40) 1 (31) (40) (40) 1 (31) (40) (40) 1 (31) (26) 가 (40) 가

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 (13) 가 , 2 3 (13)
 가 .
 1 ITO(Indium tin Oxide), IZO(Indium Zinc Oxide), ZnO, In₂O₃ , 2 Fe, Co, V, Ti, Al, Ag, Si, Ge, Y, Zn, Zr, W, Ta, Cu, Pt .
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 . (40) ,
 (40) 1 (31) , (40) 1 (31) ,
 (40) 1 (31) (40) , 1
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 , 4 , 1 (10) (41) , 1 (37)
 (13) , 1 (10) , TFT (20) , TFT (20)
 TFT (20) .
 , (Glass) 1 (10) (11) . (11) SiO₂ , PE
 CVD , APCVD , LPCVD , ECR (11) 3000
 가 .
 (11) (21) , ,
 .
 (21) , SiO₂
 PECVD , APCVD , LPCVD , ECR , MoW, Al/Cu
 가 .
 , N P
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 (21) TFT (20) (24) (25) (26)
 , TFT (20) (13) , (13) 1
 (13a) .
 (13) 2 (41) , 1 ,
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 , (41) 1 (37) ITO IZO가 1 (37) 1
 (41) 1 (37) ,
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1 (37) (50) , 5
(half-tone)
가 , 가 , 5 , 1 (52) (51)
(40) , 1 (31) 6 ,
(40) 1 (31)
, 가 .
, 1 (31) (14) , (14a)
(14a) (32) , (32)
, 2 (33) , 2 (33) . 2 (33) (32)
2 (12)
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(40) , (40) 7 ,
(40) 1 (31)
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, , 1 1 2 3
ITO(Indium tin Oxide), IZO(Indium Zinc Oxide),
ZnO, In₂O₃ 2 Fe, Co, V, Ti, Al, Ag, Si, Ge, Y, Zn, Zr, W, Ta, Cu, Pt
, Cr CrOx(x ≥ 1)
2 3 1 1
Nx(x ≥ 1), MgF₂, CaF₂, Al₂O₃, SnO₂ 2 Fe, Co, V, Ti, Al, Ag, Si, Ge, Y, Zn, Zr, W, Ta, Cu, Pt
(40) 1 (31) (13) 1 (10) 4
TFT (20) 7 , (40)
1 (31) (40) 1 , (40)
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8 , 1 (31) (40) , (40) 1 (31) TFT (

20) (26) (40) (13) (13a) (31) (2

6) (40a) (13a)(40a) 1 (31) (2

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TFT TFT 가

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1 $\text{SiO}_x(x \geq 1)$, $\text{SiN}_x(x \geq 1)$, MgF_2 , CaF_2 , Al_2O_3 , SnO_2
ITO(Indium tin Oxide), IZO(Indium Zinc Oxide), ZnO , In_2O_3

, 2 Fe, Co, V
, Ti, Al, Ag, Si, Ge, Y, Zn, Zr, W, Ta, Cu, Pt

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Cr $\text{CrO}_x(x \geq 1)$

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1 ITO(Indium tin Oxide), IZO(Indium Zinc Oxide), ZnO, In_2O_3 , Fe, Co, V, Ti, Al, Ag, Si, Ge, Y, Zn, Zr, W, Ta, Cu, Pt .

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가 가 , 2 .

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1 ITO(Indium tin Oxide), IZO(Indium Zinc Oxide), ZnO, In_2O_3 Fe, Co, V, Ti, Al, Ag, Si, Ge, Y, Zn, Zr, W, Ta, Cu, Pt ,

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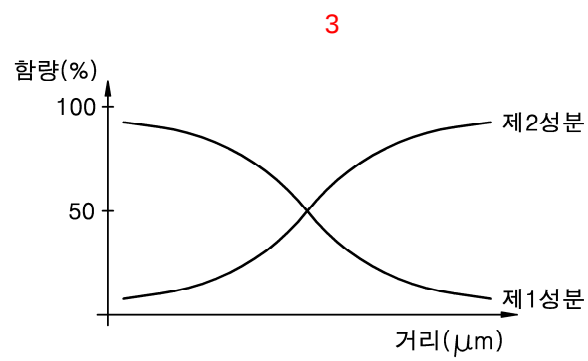
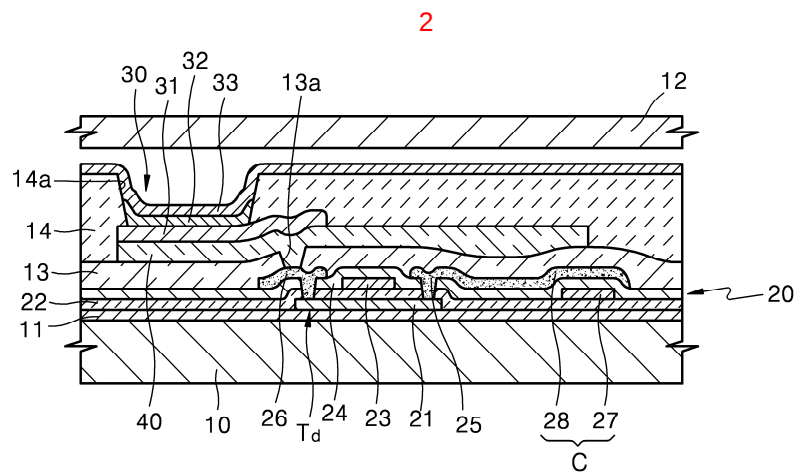
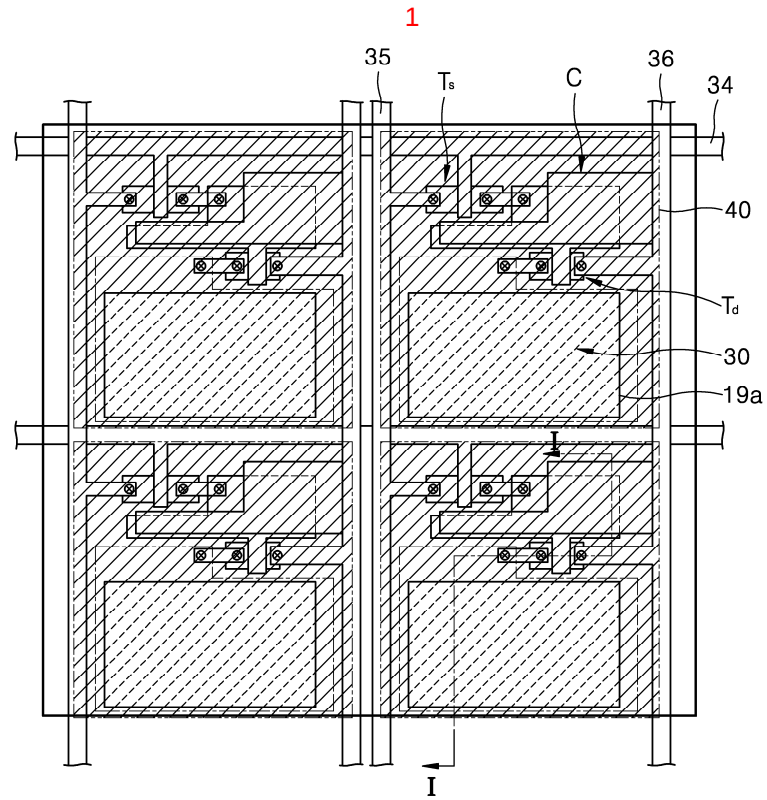
;가

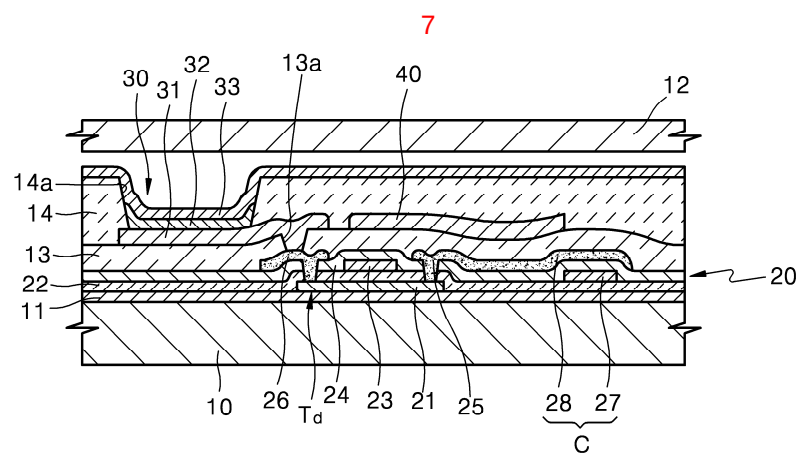
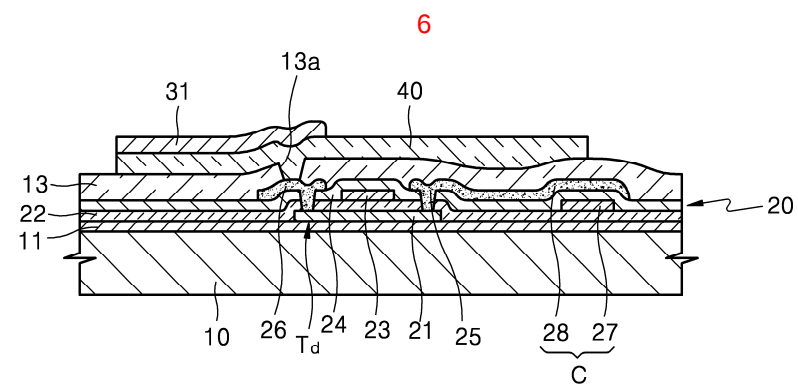
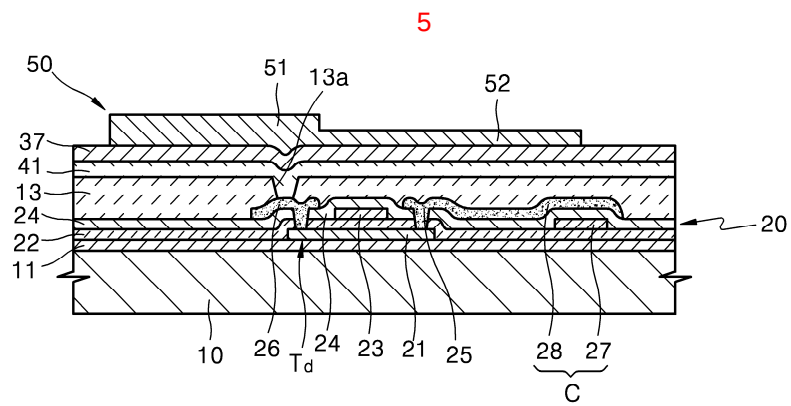
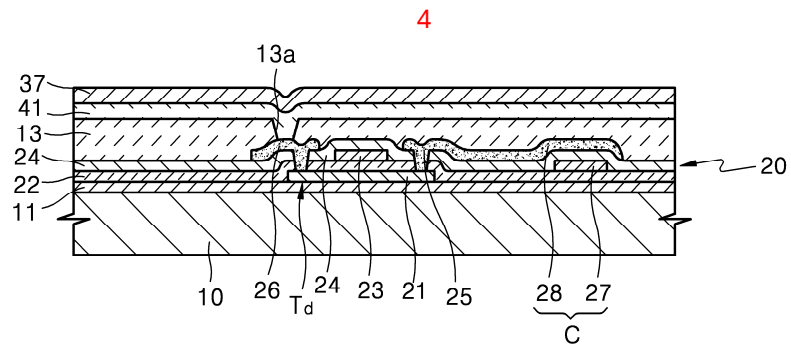
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31 39.

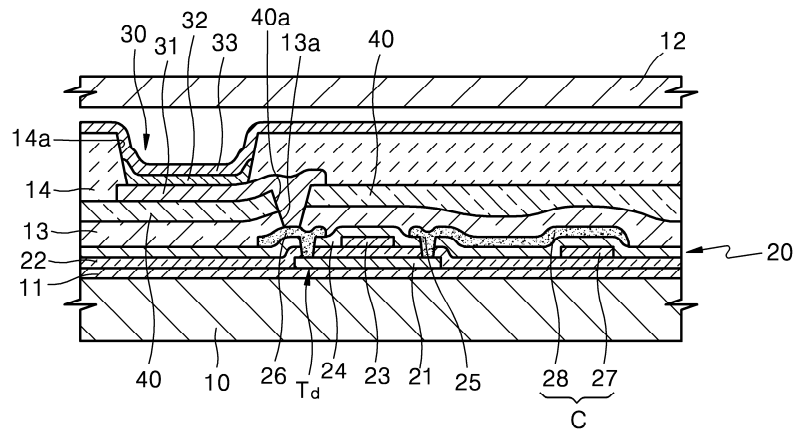
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专利名称(译)	有机电致发光显示装置及其制造方法		
公开(公告)号	KR1020050010334A	公开(公告)日	2005-01-27
申请号	KR1020030049545	申请日	2003-07-19
申请(专利权)人(译)	三星SD眼有限公司		
当前申请(专利权)人(译)	三星SD眼有限公司		
[标]发明人	KOO JAEON 구재본 PARK JIYONG 박지용		
发明人	구재본 박지용		
IPC分类号	H05B33/22		
CPC分类号	H01L27/3272 H01L51/5284 H01L51/56		
代理人(译)	李, 杨HAE		
其他公开文献	KR100544122B1		
外部链接	Espacenet		

摘要(译)

本发明提供了第一和第二基板，其增加了亮度，同时防止了外部光的反射并改善了对比度，并且为此面临着这一点。为了用简单的工艺形成电极和黑色矩阵，第一电极上部的第一电极形成在像黑色矩阵的层上，在第一基板的上部形成所需图案和黑色矩阵上部或者，黑色矩阵，第一电极和有机电致发光显示装置，其包括形成的第二电极和有机层，以便面对。在第一电极和第二电极之间允许有机层并辐射并至少具有有机发光层。有机，EL和黑色矩阵。

