

(19)
(12)

(KR)
(A)

(51) 。 Int. Cl.⁷
H05B 33/00

(11)
(43)

10-2004-0085025
2004 10 07

(21)

10-2004-0020737

(22)

2004 03 26

(30)

10/401,658

2003 03 28

(US)

(71)

343

(72)

14468

95

14468

36

(74)

:

(54)

sensor)

;

(window)

;

(OLED)

.

(photo

1

1

(OLED)

.

2

OLED

.

3

OLED

.

(photosensor)

(OLED)

가

OLED

OLED 1 (top-emitting) (bottom-emitting) OLED 2

가

1 2

2

OLED

(

1/2

OLED OLED

(Bohan) 1994 12 6 5,371,537)

2002 12 3 6,489,631 (light sensor) (Young) (electro-luminescen

t pixel element)

(gated) (TFT)

OLED

(window)

OLED

2 (12), OLED TFT (TFT) (16) TFT (14)
 (14) , OLED (18) 가 (16) TFT 1 (18)
 (18) 2 (17) , (18)

1 (EL) (19)가
 , EL (32), EL (34), (36), (38) (39) ,

EL 1 (18) EL
 (30) , EL 2 OLED 가 1 'OLED' O
 LED , OLED 가 (31) (30)

TFT (14) (addressing) 1 (18)
 2 (30) EL

1 (13) 1 (18) 1 (16) 1
 (13) (29) 1 (18) (18) 1 (16)
 (13) , (29) 1 (18) ,

1 (18) (29)
 (19) , 1 (18) (13) ,
 (29) (29) 1 (18)
 1 (18) ,
 (29) , 1 (18) 가 가 ,
 2 (19) 2
 (simplifying) (29) , ITO)
 (29) (18) (29)
 (13)

(29) (13) , (29) ()
 (13)가 (29)가 ,
 (13)

1988 9 6 (Tang) 4,76
 9,292 1991 10 29 (VanSlyke) 5,061,569
 (OLED) OLED

OLED .

가 (TFT)

가 .

(101), (103), - (104), - (107), (109), 3 (111)

(113)

EL 500nm

OLED (260) / OLED 가 EL

가 가 OLED가,

가 AC . AC- O

LED 5,552,678

OLED 가

가

가

EL (103)

(ITO), - (IZO)

가

EL

4.1eV

(sputtering),

(103) - (107) - (105)

6,208,075

m-MTDATA(4,4',4'- [3-) 0 891 121 A1 EP 1 029 909 A1 EL

4,720,432

(107) - 3 (

3가

3

(Klupfel) 3,180,730

(Brantley) 3,567,450 3,658,520

3 4,720,432 5,061,569 3

3

1,1- (4- -p-)

1,1- (4- -p-)-4-

4,4'- ()

(4- -2-)-

N,N,N- (p-)

4-(-p-)-4'-[4(-p-)-]

N,N,N',N'- -p- -4,4'-

N,N,N',N'- -4,4'-

N,N,N',N'- -1- -4,4'-

N,N,N',N'- -2- -4,4'-

N-

4,4'- [N-(1-)-N-]

4,4'- [N-(1-)-N-(2-)]

4,4'- [N-(1-)-N-]p-

4,4'- [N-(2-)-N-]

4,4'- [N-(3-)-N-]

1,5- [N-(1-)-N-]

4,4'- [N-(9-)-N-]

4,4'- [N-(1-)-N-]p-

4,4'- [N-(2-)-N-]

4,4'- [N-(8-)-N-]

4,4'- [N-(2-)-N-]

4,4'- [N-(2-)-N-]

4,4'- [N-(2-)-N-]

4,4'- [N-(1-)-N-]

2,6- (-p-)

2,6- [-(1-)]

2,6- [N-(1-)-N-(2-)]

N,N,N',N'- (2-)-4,4'- -p-

4,4'- {N- -N-[4-(1-)-] }

4,4'- [N- -N-(2-)]

2,6- [N,N- (2-)]

1,5- [N-(1-)-N-]

4,4',4'- [(3-)]

- EP 1 009 041
3
, (N-)(PVK)
, (3,4-)/ (4-)(
, 'PEDOT/PSS')

4,769,292 가 5,935,721 , EL (LEL)(109)
가 -

() , - ,

51 , WO 00/57676 WO 00/70655 , WO 98/55561 , WO 00/188
0.01 10 % 가

p-), PPV)가 (: (
가 가

(host triplet energy level)

가

41,671 ; 5,150,006 ; 5,151,629 ; 5,405,709 ; 5,484,922 , 4,768,292 ; 5,141,671 ; 5,1
83,823 ; 5,755,999 ; 5,928,802 ; 5,935,720 ; 5,935,721 ; 5,593,788 ; 5,645,948 ; 5,6
6,020,078

8- ()

:

CO-1: [, (8-) (III)]

CO-2: [, (8-) (II)]

CO-3: [{f}-8-] (II)

CO-4: (2- -8-) - - - (2- -8-) (II)

CO-5: [, (8-)]

CO-6: (5-) [, (5- -8-) (III)]

CO-7: [, (8-) (I)]

CO-8: [, (8-) (III)]

CO-9: [, (8-) (IV)]

- (2-) , 5,935,721 9,10-
2,2',2'-(1,3,5-) [1- -1H-] 가

	()	()	
EL 8-	- (111)		(8-
	4,356,429		4,539,507
		(113)	
		(4.0eV)	
0% Mg:Ag ETL)	(EIL)	가 , EIL 가	1 2 (:
5,677,572	LiF	Al	
	5,059,861 , 5,059,862	6,140,763	
885,211 , 5,247,190 , 3,234,963 , 5,703,436 , 5,608,287 , 5,837,391 , 5,677,572 , 5,776,622 , 5,776,623 , 5,714,838 , 5,969,474 , 5,739,545 , 5,981,306 , 6,137,223 , 6,140,763 , 6,172,459 , EP 1 076 368 , 6,278,236 6,284,393			4,
	(through-mask deposition),	5,276,380 EP 0 732 86	
8	(intergral shadow masking),		
	(109) (111)		
	가		
OLED 1 187 235 , 5,405,709	20020025419 , EP 1 182 244 , 5,283,182	5,683,823 , 5,503,910 ,	EP
	가		
	20020015859		
	5,703,436	6,337,492	
(stacked device architecture)			
6,237,529 1		(boat)'	
	(5,294,870),		
(5,688,551 , 5,851,709	6,066,357)	(6,066,35	

7)

OLED

6,226,890

SiOx,

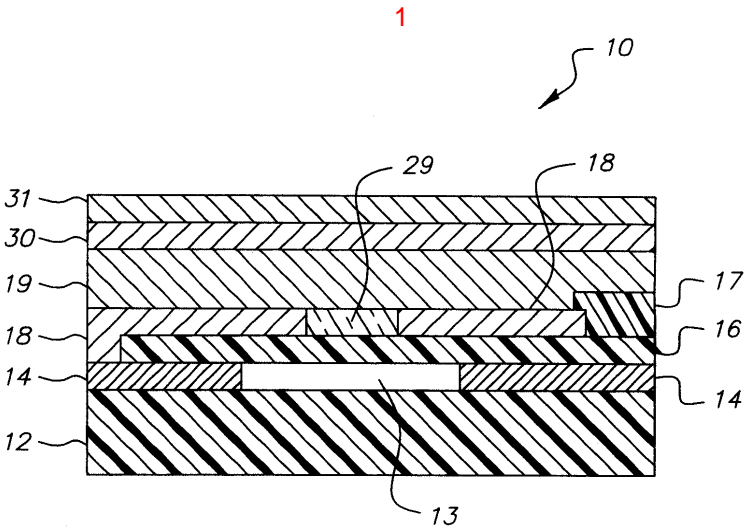
/

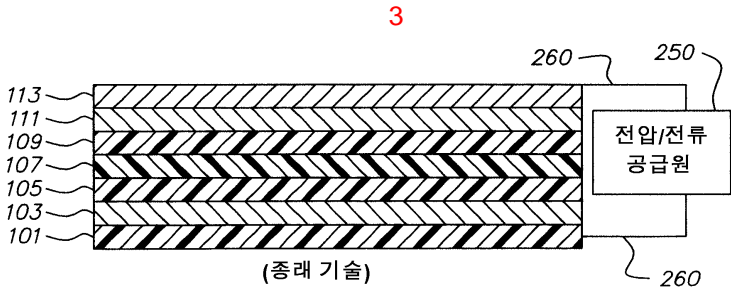
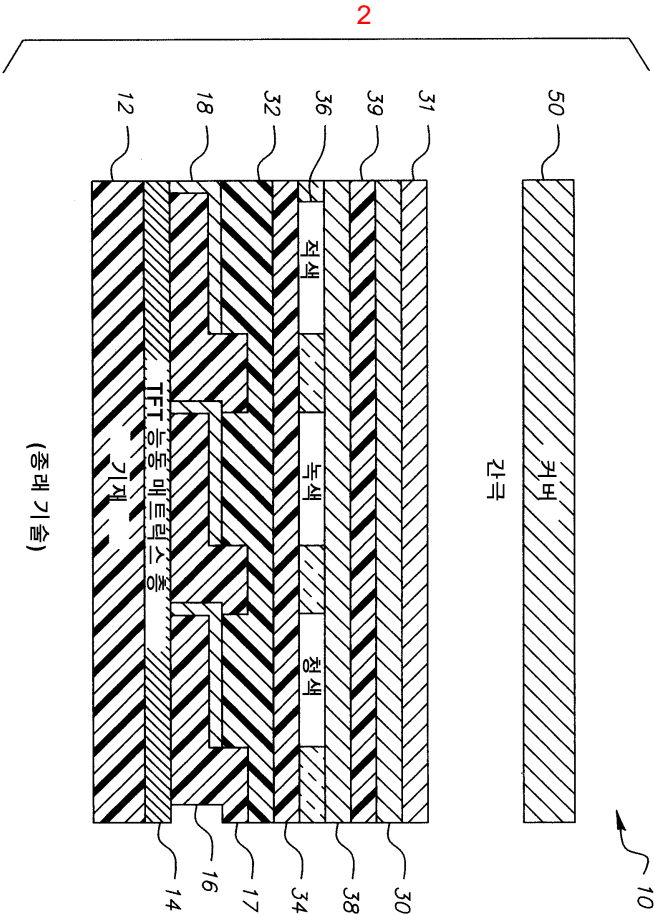
OLED

OLED

OLED

- (57)
- 1.
- a) ;
- b) (window) ;
- c) ;
- d)
- (OLED)





专利名称(译)	具有光学传感器的有机发光二极管显示器		
公开(公告)号	KR1020040085025A	公开(公告)日	2004-10-07
申请号	KR1020040020737	申请日	2004-03-26
[标]申请(专利权)人(译)	全球OLED TECH		
申请(专利权)人(译)	글로벌오엘이디테크놀로지엘엘씨		
当前申请(专利权)人(译)	글로벌오엘이디테크놀로지엘엘씨		
[标]发明人	ARNOLD ANDREW D 아놀드앤드류디 COK RONALDS 콕로널드에스		
发明人	아놀드앤드류디 콕로널드에스		
IPC分类号	H05B33/02 H01L51/50 H01L27/32 H05B33/26 H01L51/52 H05B33/00		
CPC分类号	H01L27/3269 H01L51/5203 H01L2251/5315		
代理人(译)	金勇 年轻的小公园		
优先权	10/401658 2003-03-28 US		
其他公开文献	KR100995825B1		
外部链接	Espacenet		

摘要(译)

透明电极本发明涉及透明电极;一种具有透明窗口的反射电极;发光层设置在透明电极和反射电极之间;以及包括光电传感器的有机发光二极管(OLED)显示器,所述光电传感器安装在反射电极的透明窗口下方并感测由发光层产生的光。 1

