

(19)
(12)

(KR)
(A)

(51) 。 Int. Cl. ⁷ H05B 33/26	(11) (43)	2003-0083366 2003 10 30
(21) 10-2002-0021874		
(22) 2002 04 22		
(71)	20	
(72)	111 210	
	102 103	
	107 101	
(74)		
:		
(54)		

가

1 .
2 .
3 2 .
4a 4b .
5 .
6 17 5 .
< >
1 : 2 :
3,22 : 4,20,38 : EL
12,32 : 14,34 :
18 : 22 :
24 : 36 :
40 : 42,46 :
44 :

 ,
 ,
(Cathode Ray Tube)
(Liquid Crystal Display),
(Plasma Display Panel)
(Field Emission Display),
(Electro - Luminescence, : 'EL'
)
 . EL
 . EL
 EL EL EL EL EL
 100 200V 가 , EL EL EL EL EL EL
 ht Source) , 가 (pixel), (contrast ratio)
 (Surface Lig
 1 EL , 2 EL

1 2 , EL (1) (chemical etching)
 (stripe) (anode)(2) EL (4)
 (2) (cathode)(3) (2)
 (Indium Tin Oxide ; , 'ITO') (In₂O₃) (SnO₂)
 (chip) (sealing)(5)
 3 2 EL , EL
 가
 3 , EL (12) (14) , (14)
 (14) (22) (EL' , 20) , EL
 (12) (18)
 EL (12) (work function)가 (14) 가 (22)
 EL (20) 가 (22) 가 (14) (Cathode)
 (Anode) (14)
 가 (22) EL (20) (18)
 EL (20) (14) (22) , (14,22)
 (Polaron) (exciton)
 EL (22) EL (18)
 (18)
 4a 4b , (18) 4a (24) 4b
 (18) (25) (24)
 EL (18) , EL
 (Encapsulation) (12) ()
 가 EL

[illegible]

(Anode) , 가 (Cathode) 가 .

(34)

EL (38) (34) (44) , (34) , , (40) .

(exciton) , (Polaron)

1 (42) , 2 (46) (32) (40) EL (38) (40) (A1,A2) .

가 EL 1 2 (42,46) EL .

6 17 5 EL .

6 17 (32) (34) (SnO₂) (34) ITO가 (34) , (34) (In₂O₃) .

6 (34) (32) 6 (34) (34) 7 'A-A'' (32) .

(36) , (36) 8 EL (38) EL (38) (34) .

EL (38) 9 10 (36) EL (38) (32) (40) 9 10 .

(40) 11 (40) 1 (42) 1 (SiNx) (42) (Physical Vapor D eposition, PVD) (SiO₂) (42) (PECVD) (40) (40) (40) .

1 (42) 12 (44) (44) AZ1512, AZ5214, AZ 4533, AZ4562 (44) EL (38) (40) (44) 1 2μm (44) (44) .

1 (42) (44) (40) (44) (44) (44) (44) .

hy) (44) 13 EL (38) (Photolithograp (Mask) 14 1 (42) 1 (42) (Reactive Ion Etching ; 'RIE') (44) RIE . RIE (44) RIE (44) (Step Coverage)가 RIE (4

4) .

1 (42) (44) 15 (40)

. (40) RIE , (44) (40) 가

(40) (44)

(44) 16 (36)

. (36) RIE , (36) (40)

(36) (44)

, (44) 1 , (36) 14 16 RIE

14 16 RIE 17 1 (42), (40) (36)

) (SiO₂) (32) 2 (46) . 2 (46) (SiNx)

VD) . , 2 (46) 1 (42) (PECVD) (Physical Vapor Deposition, P

가

, 1 2 (42)(46) (PECVD) 400

EL (38) (40)

, ,

가

1 2 ,

가

(57)

1.

2

2.

1

1 2 (SiNx) (SiO₂)

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1 2

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5.

1 ,

(In₂O₃) (SnO₂)

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8.

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9 10.

1 2 μ m 가

7 11.

1

8 12.

12 13.

(Reactive Ion Etching, RIE)

7 14.

(Photo Resist)

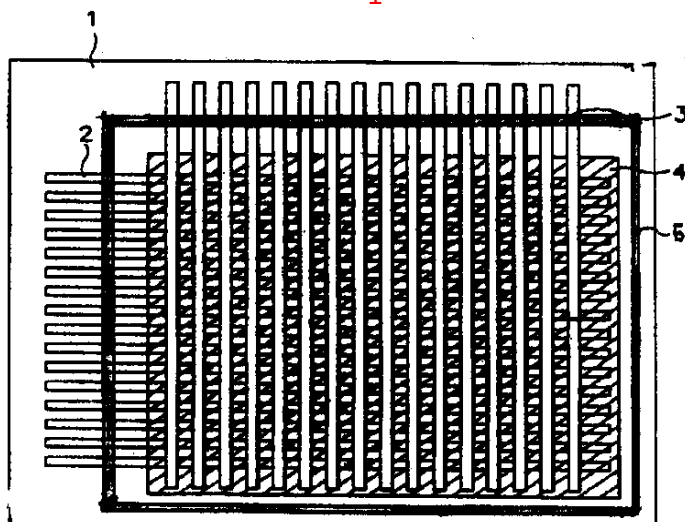
6 15.

1 2 (SiNx) (SiO₂) (PECVD)
(PVD)

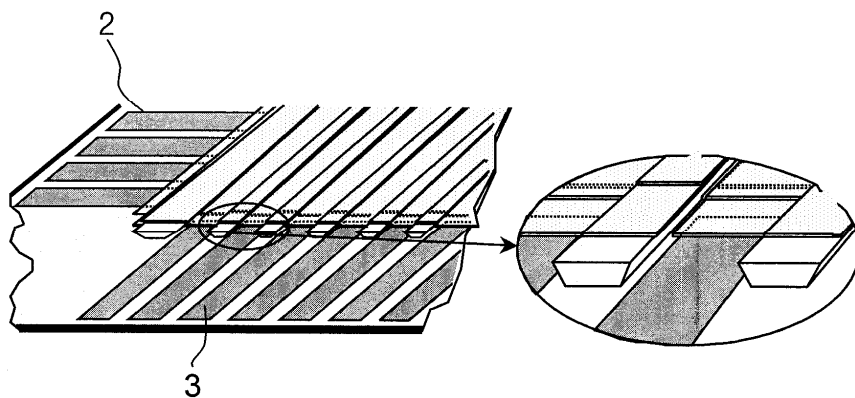
6 16.

1 2

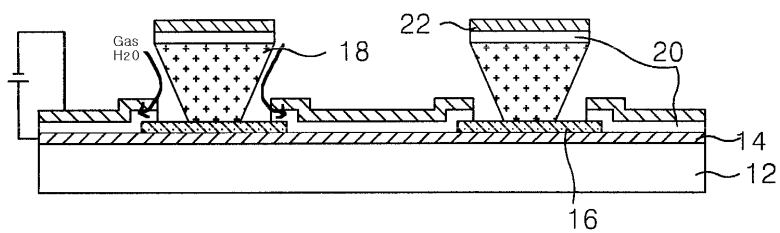
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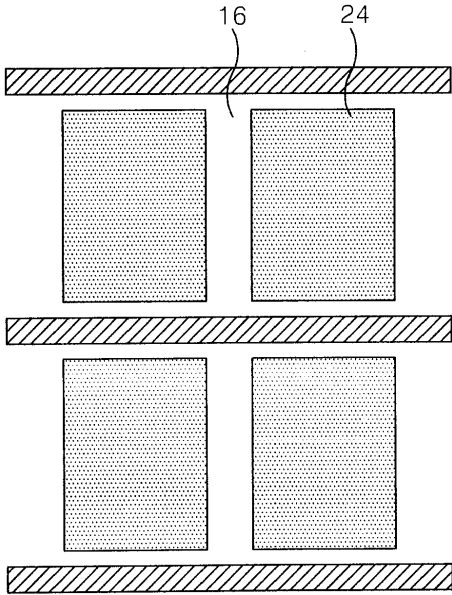
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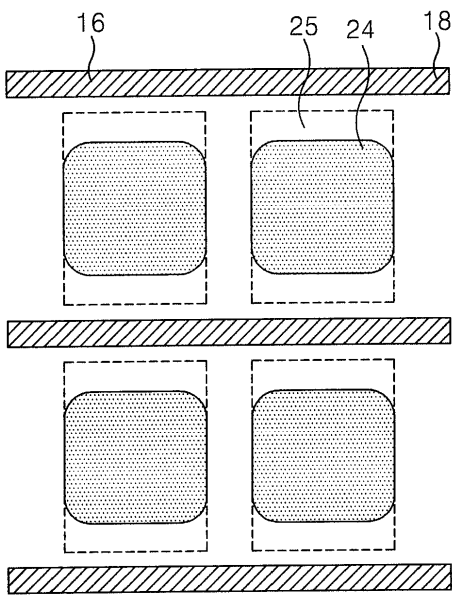
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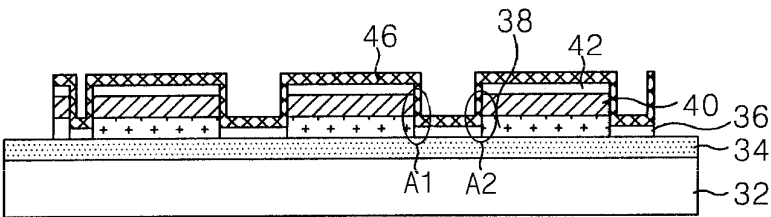
4a



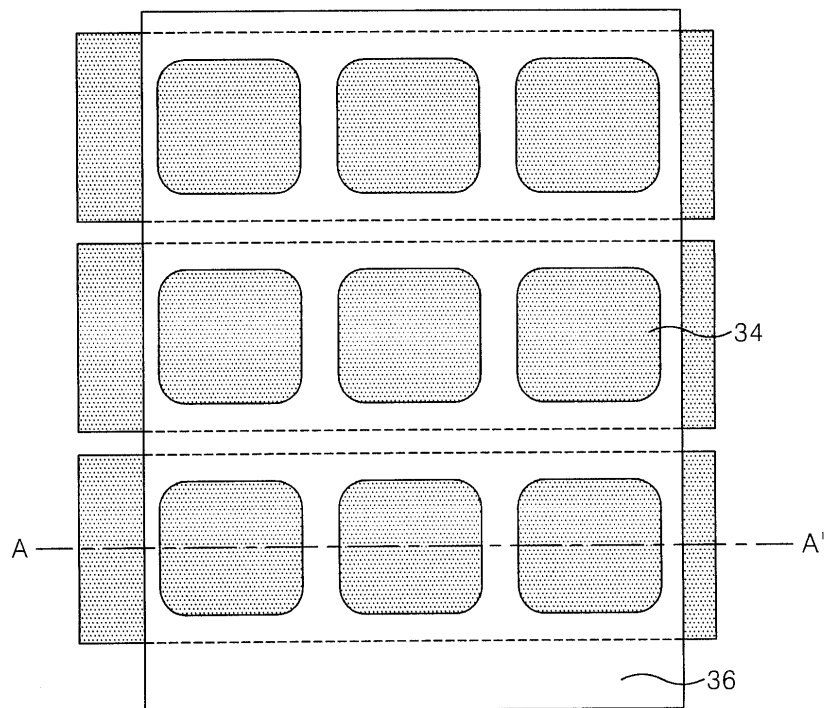
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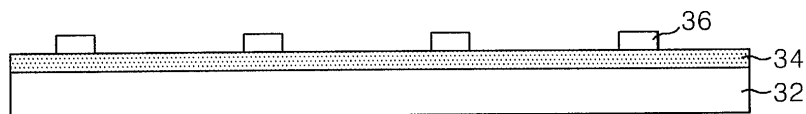
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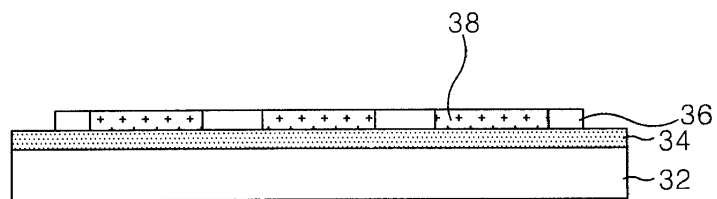
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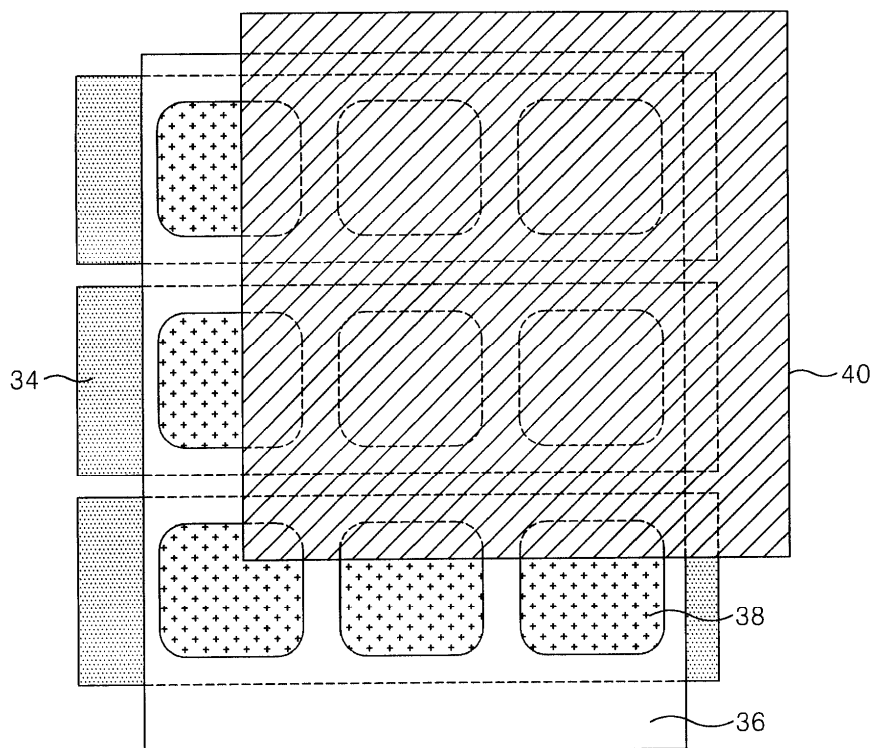
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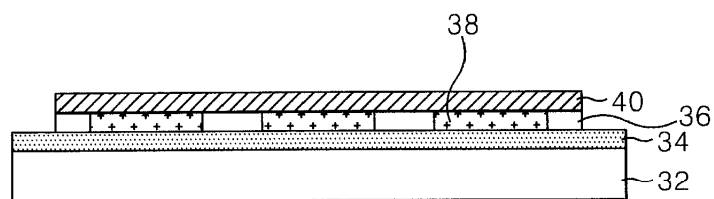
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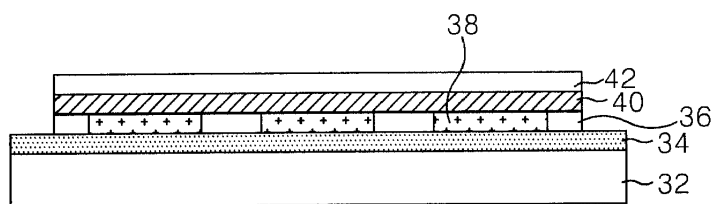
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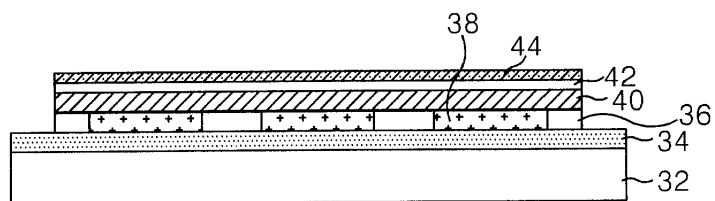
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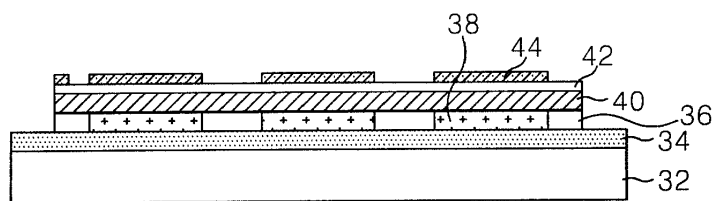
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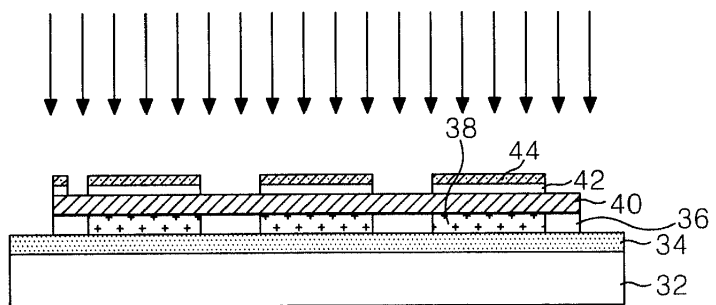
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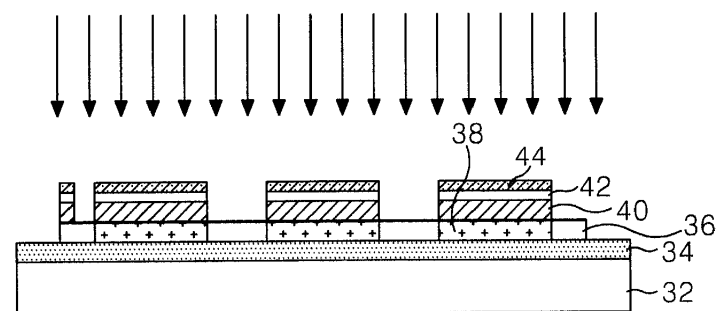
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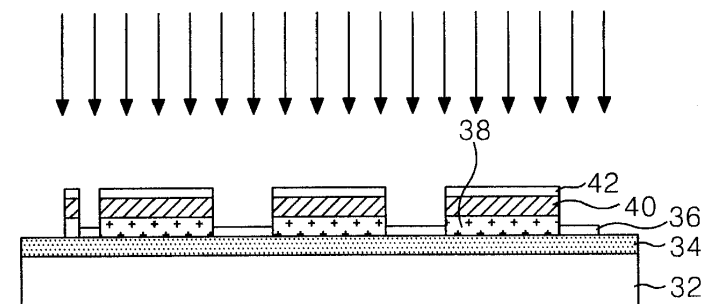
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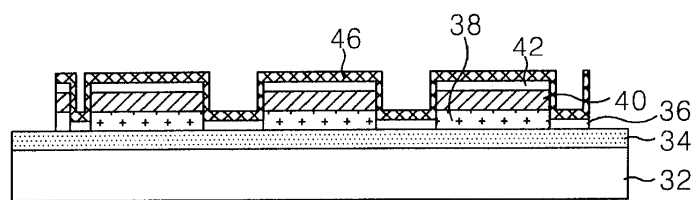
15



16



17



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	KR1020030083366A	公开(公告)日	2003-10-30
申请号	KR1020020021874	申请日	2002-04-22
申请(专利权)人(译)	LG电子公司		
当前申请(专利权)人(译)	LG电子公司		
[标]发明人	LEE ILHO 이일호 BAE HYODAE 배효대 PARK HYOUNGGUEN 박형근		
发明人	이일호 배효대 박형근		
IPC分类号	H05B33/26		
CPC分类号	H01L51/5256 H01L51/56 H01L2251/308		
代理人(译)	李, SOO WOONG		
其他公开文献	KR100692856B1		
外部链接	Espacenet		

摘要(译)

本发明涉及一种有机电致发光显示装置及其制造方法，该薄显示装置改善了有机电致发光显示装置的寿命。根据本发明的有机电致发光显示装置包括有机发光层，其与形成在透明电极层上的有机发光层相对应，在透明基板中形成成为成行的带状和绝缘层，形成在透明电极上的显示装置的有效发光区域和由绝缘层和第一保护层限定的有效发光区域，其形成在金属电极层上的金属电极层对应于每个另外，它对应于有机发光层，其对应于形成的金属电极层和第二保护层在基板顶部区域中形成气氛，以覆盖大气中暴露的每层，并保护每层免受外部水分和外来物质的影响。根据该结构，由于即使根据本发明的有机电致发光显示装置及其制造方法不使用传统的阻挡肋结构，根据本发明的有机电致发光显示装置及其制造方法也可以包括完整的电气在阴极电极分离所需的阴极和阴极电极间间隙之间的隔离在其能够制造的同时被最小化。并且，由于不使用传统的障肋结构，它排除了包括水分和杂质等的侵入可能性，并且包括显示装置的劣化和发光区域减小等问题可以解决。

