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10 - 2000 - 0085560
2000 12 29

(71)

20

(72)

2 270 - 78

76 - 55 104 201

(74)

:

(54)

가 (S); (S) 가 (1) 가
(D); (S) (D) ;
EL (P); EL (P) (S) (D) , EL (P)
가 (PS) / IC IC , SLS
IC 가 TFT ,

4a

SLS, LTPS

1

2 1

3 (T) EL (P) _P0

4a 1 , () TFT SLS()
.

4b 2 , () TFT SLS(
) .

*

1 : 2 :

3 : 4 :

5 : 6 :

7 : 8 :

10 : 11 :

13 : EL 14 :

ion) , SLS(sequential lateral solidificat
가 가

LCD, PDP, FED, EL

가

(Passive Matrix)

(Active Matrix)

FED EL

(Line Time)

1

1 가 가 (S) , (S) 가
가 (D) , (S) (D) 가
EL (P) , EL (P) (T) (S) (D) ,
2 EL (P) OLED(organic light emitting device : P) , 2 TFT OLED(P)
(T)가
_P1 _P0 TFT Si ,
Si Si (Excimer laser) Si
Si (H)가 , LTPS
가 가 , TF
T
, Si 가 ,
TFT 가 TFT 가 ,
Si (grain) 가 TFT
- Si TFT
가 TFT 가 가 TFT 4
/ IC TFT SLS(Sequential Lateral Solidification) EL TFT
가 , TFT
IC() TFT SLS

가 (S); (S)
 가 (D); (S) (D);
 EL (P); (S) (D) ,
 EL (P) (SLS : sequential lateral soli
 dification) (T);
 가 IC IC .

(1) 가 가 (S); (S)
 가 (D); (S) (D) ;
 EL (P); EL (P) (S) (D) ,
 EL (P) (T);
 가 , (SLS : sequential lateral solidification)
 IC IC .
 IC TFT EL TFT , TFT
 가 Si IC TFT SLS TFT
 TFT 가 TFT
 가 .

1 .
 1 가 가 (S) , (S)
 가 (D) , (S) (D) 가
 EL (P) , EL (P) (T) (S) (D) ,
 2 1 OLED(organic light emitting device : P) , 2 TFT OLED(P)
 EL (P) (T)가 .

2 (S : Scan Line) ,
 가 (D :Data Line) ,
 _P1 , (P/L: Power Line) , 가
 _PO (T) , _Cs , _Cs
 OLED(organic light emitting device : P) _PO .

2 TFT _PO 3 , (1) (2), (

2) (3), (2) (4), (4)
 (5), (3) (1) (6),
 (3) / (7, 8) (7) (8), (8) (10)
 (8) (10) (11), (10)
 (11) EL (13), EL (Electroluminescence layer: 13)
 (14) OLED(P)가 .
 OLED(P) EL , EL (hole injection layer), (hole
 transport layer), (emmitting layer) (electron transport layer) .
 (hole injection layer) (11) , (14) .
 , _P1 _P0 (5) ,
 .
 _P1 _P0 TFT Si (1) ,
 Si SLS Si .
 SLS TFT Si 가
 TFT .
 Si (grain) 가 TFT
 .
 4a 1 , () TFT SLS()
 .
 4a , (P :) (PS), (PS)
 가 IC(GIC) IC(DIC) , IC 가
 가 .
 (P :) (T) TFT SLS , ,
 IC IC TFT LTPS (,),
 (SLS : sequential lateral solidification) .
 4b 2 , () TFT SLS(
)
 .
 4b , (1) (P ;) (PS) , (PS)
 (1) IC(GIC) IC(DIC) ,
 IC 가 가 .
 (P :) (T) TFT LTPS (,
) , TFT SLS .
 3 , ()
 TFT SLS() .

(P ; IC) (PS) , (PS) (1)
IC , IC 가 가

S (P :) (T) TFT TFT SL

1, 2 3 (SLS : sequential lateral solidification) SLS
- Si(High - throughput poly - Si), SLS - Si(directional poly - Si), SLS x - Si(cry
stal - Si)

가

, EL TFT / IC TFT SLS(Sequential L
ateral Solidification) TFT 가 ,

, IC() TFT SLS

가

(57)

1.

(1) 가 가 (S);

(S) 가 (D);

(S) (D) ;

EL (P);

EL (P) , (S) (D) , EL (P)
(T); (SLS : sequential lateral solidification)

가 IC

IC

2.

1 ,

(SLS : sequential lateral solidification) SLS - Si(High - throughpu
t poly - Si), SLS - Si(directional poly - Si), SLS x - Si(crystal - Si)

3.

1 , (T)

(P);

가

1 (P1);

가

_Cs(Cs);

_Cs

_PO(P0)

4.

1 ,

IC

IC TFT

(SLS : sequential lateral solidification)

(1)

5.

4 ,

(SLS : sequential lateral solidification) SLS - Si(High - throughpu
t poly - Si), SLS - Si(directional poly - Si), SLS x - Si(crystal - Si)

6.

(1) 가 가 (S);

(S) 가 (D);

(S) (D) ;

EL (P);

EL (P) (S) (D) , EL (P)
(T);

: sequential lateral solidification) 가 , IC IC (SLS

7.

6 ,

(SLS : sequential lateral solidification) SLS - Si(High - throughpu
t poly - Si), SLS - Si(directional poly - Si), SLS x - Si(crystal - Si)

8.

6 , (T)

(P);

가 1 (P1);

가

_Cs(Cs);

_Cs

_PO(P0)

9.

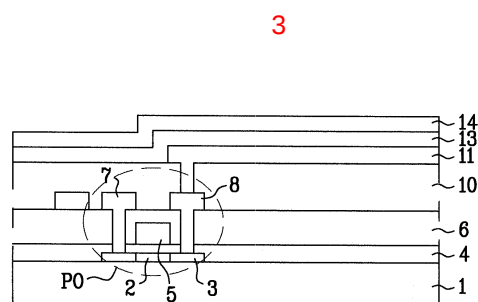
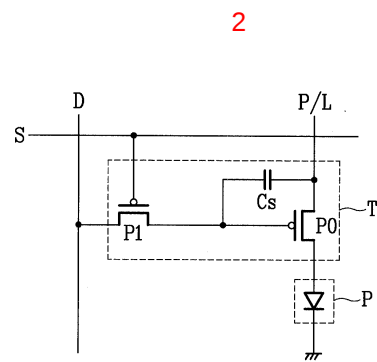
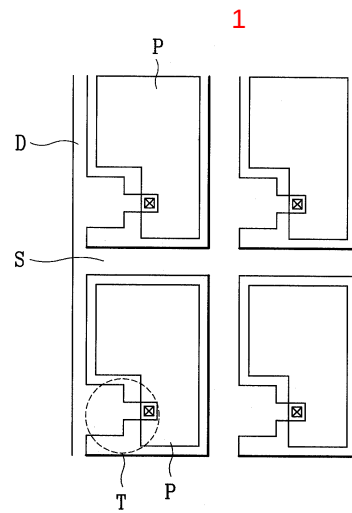
6 ,

(T) , (SLS : sequential lateral solidification)

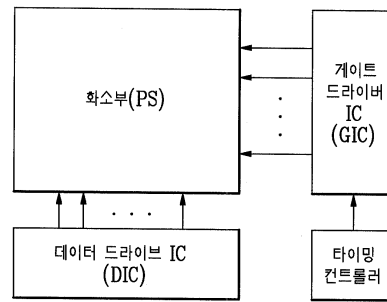
10.

9 ,

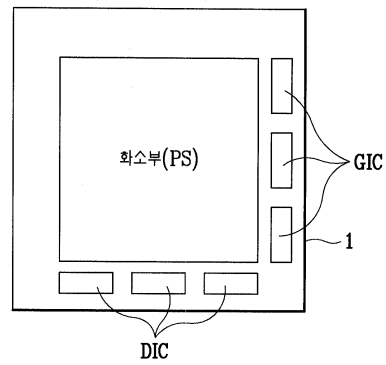
(SLS : sequential lateral solidification) SLS - Si(High - throughpu
t poly - Si), SLS - Si(directional poly - Si), SLS x - Si(crystal - Si)



4a



4b



专利名称(译)	有源矩阵有机电致发光显示装置		
公开(公告)号	KR1020020056239A	公开(公告)日	2002-07-10
申请号	KR1020000085560	申请日	2000-12-29
[标]申请(专利权)人(译)	乐金显示有限公司		
申请(专利权)人(译)	LG显示器有限公司		
当前申请(专利权)人(译)	LG显示器有限公司		
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发明人	김성기 박재용		
IPC分类号	G09G3/32 G09G3/30 H01L21/84 H01L27/32 H01L21/20 H01L27/12 H01L21/77		
CPC分类号	G09G2300/0408 G09G3/3225 H01L27/1214 H01L27/3262 G09G2300/0842 G09G2300/0809 H01L21/2026 H01L27/12 H01L27/3244 G09G3/3233 H01L27/1285 H01L21/02532 H01L21/02595 H01L21/02675		
代理人(译)	金勇 新昌		
其他公开文献	KR100672628B1		
外部链接	Espacenet		

摘要(译)

本发明提供有源矩阵有机电致发光显示装置，电源线排列在具有排列的多条数据线的方向上，数据线和恒定距离并与数据线平行，并且扫描线具有高均匀性的TFT，包括根据电压辐射光的电致发光器件，开关晶体管和驱动晶体管，用于根据通过电致发光器件中的开关晶体管施加的信号允许电源线的电源，并且开关晶体管或驱动由于连续侧形成晶体管，所以在具有多条扫描线的基板上进行结晶（SLS）模式，布置在垂直于扫描线和集成的单向方向和方向上，并且使得小型化和均匀性显示装置的亮度得到改善。根据电压辐射光的电致发光器件形成在电力线和数据线之间的像素区域中并被施加。对于数据线，数据线根据扫描线的信号切换信号。SLS，LTPS

