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2003-0055845
2003 07 04

(21) 10-2001-0085957
(22) 2001 12 27

(71) 3 416

(72) 89-1 1 103 1501

(74) :

(54)

가 .
가 .
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8 7

9 8

가

가

가 CRT
가 가

(Twisted Nematic; , TN) (Super -
Twisted Nematic; , STN) TN
(Active matrix; , AM) STN (passive matrix; , PM)

AM TFT-LCD , TFT LCD , PM

TFT-LCD a-Si (Thin film transistor liquid crystal display device; , TFT -
LCD) , poly-Si TFT LCD poly-Si TFT LCD , 가 a-Si TFT
TFT poly-Si TFT LCD IMT-2000
a-Si TFT LCD
PC, LCD , HDTV

1 a-Si TFT LCD

1 , a-Si TFT LCD (32) (CHIP ON FILM; , COF)
(34) , (32) (36)
(38) COF (40) , (40)

(40) TFT (turn
-on) 가

a-Si TFT LCD poly-Si TFT
LCD (OUTER LEAD BONING; , OLB) 가 , a-
si TFT LCD

a-Si TFT LCD poly-Si TFT LCD

poly-Si TFT

•

가

가 가 , 가 가 .

2. 가

1
1 가 1 2

1 가 1 2 가 .

$$\begin{array}{ccccccc} 2 & & (500) & & (100) & & (\\ 100) & & (100) & & (200) & & . \end{array}$$

(100) (110) (110)

(190)

(130) (110) TFT (120) TFT (120) RGB ()

TFT (120) a-Si TFT (120)

(190) (110) (190) (110) (190)

TFT (120)

(200) 1 (220), 1 (11

(240) 2 (240) 2 (260) (

(240) 3 2 가

(280)

(200) (100) (290) (290) (29

(300)가

3 2

3 , TFT (120) (A) (A) (B, C)

(A) TFT (A) TFT ()가 ()가

n TFT (GLn) (DLm) TFT TFT

() (GLn) TFT

(B, C) (DLm) 1 (B) (DLm) (GL

2 (C) 1 (B) (140) (190)

1 (191)

2 (C) (GLn) (GLn)

가 (150) (150)가 (190) 2 (192) 2

(192) (VSS) (ST), 1 (CK), 2 (CKB)

4 3

4 , n (150) (SRCn+1) n+1 (S

RC1~SRCn+1) (SRC) (OUT)가 (IN) (OUT)

n (CT) n (SRC1~SRCn) (OUT)

(GLn)

(IN), (OUT), (CT), (CK) (

VSS)

SRC2i) 2 (CKB)가 (SRC2i-1) 1 (CK)가 (CKB)

가 .

T) (CT) 가 , (C

, () 가 ,

(SRC1) (IN) (ST)가 ,
(SRCn+1) (SRCn) (CT)

5 4 . 6 4

5 , (151), (152) (153)

가 (151) 1 NMOS (CK) (NT11) , (N) 가 , (OUT)

(152) (IN) 가 , (N) 가 2 NMOS
(NT2) (N) (OUT) (C)

(153) (N) 가 , (CT) 가 , (VSS)
3 NMOS (NT3)

6 , 1 2 (CK, CKB) (ST)가 ,
(SRC1) (OUT1) (ST) 1 (CK)

가 , (ST) 1 (CK) 1/2
(OUT1) (ST)

(NT2) (194) (C)가 (ST) 2 NMOS
(C) 1 NMOS (NT1)가 1 (

CK) (OUT)

(OUT) (C) (

BOOTSTRAP) 1 NMOS (NT1)
1 NMOS (NT1)가 (FULL)

, (CT) 가 (VSS) , 3 NMOS
(NT3)가 , (N) 가 (VSS) 1 NMOS
(NT11)가 , (OUT)

(CT) 가 가 1 NMOS (NT3)가
(IN) 가 (NT1)

6 , (OUT1~OUT4)가

, (150) 2 (192)
(110) 가 , 가

7

, 3

7

m n

(A) (DLm)

(B), n

'n'

(B) (120)

(A) (A) (B, C, D) (B, C, D) (B)

가 TFT

1 2 3

(D)

1 (B) (190) (140) 1 (191)가 (190) 1 (191)

2 (C) n (GLn-1)

가 TFT

(GLn)

2 3 (D) n

(160, 170) (170)가 TFT

1 2 (160) (190) (120) (193)

(170) (190) 3 (194)

8 7 1 2 , 9 8

8 (170) 1 2 (160) 1 , 2

1 (160) (ST), 1 (CK) (VSS) 3

(CKB) 1 (VSS) 2 (193) 2 (170) 2 (170)

1 (160) (GLn-1) (A)

2 (C) (OUT)가 (SRC1~SRCn+1)

2 (170) (GLn) (A)

3 (D) (OUT)가 (SRC2~SRCn)

(SRCn-1) (GLn-1) (A)

(SRCn) (IN) 가 , (SRCn)

(CT) (SRCn+1) (IN)

(SRCn-1) (CT) (SRCn+1) 가 .

(CT) (SRCn)

9 , 1 2 (GLn-1) (GLn) (ST)

(CK, CKB)

(GLn)

(GLn-1)

가

(57)

1.

2 가 1 가 1

2.

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1. , 가 .

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가 , 1 2 가 , 1

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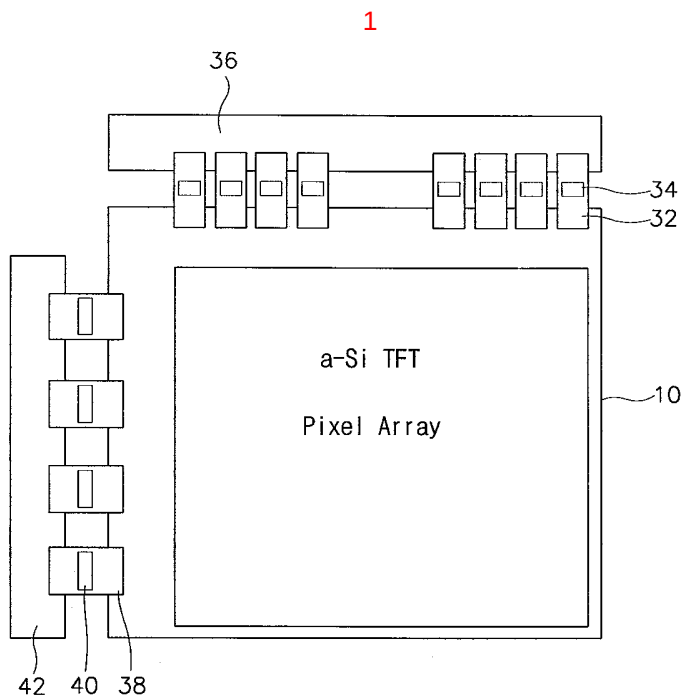
6 , 1 , 2 , 4

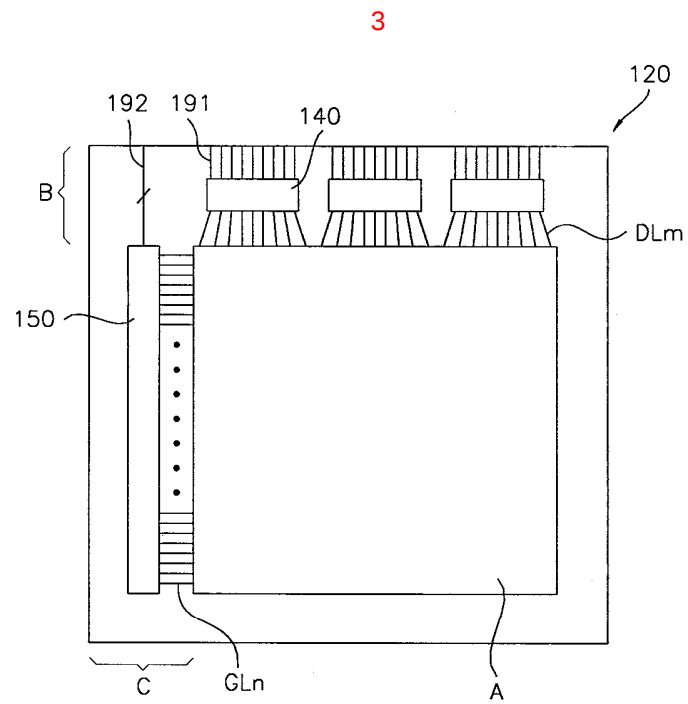
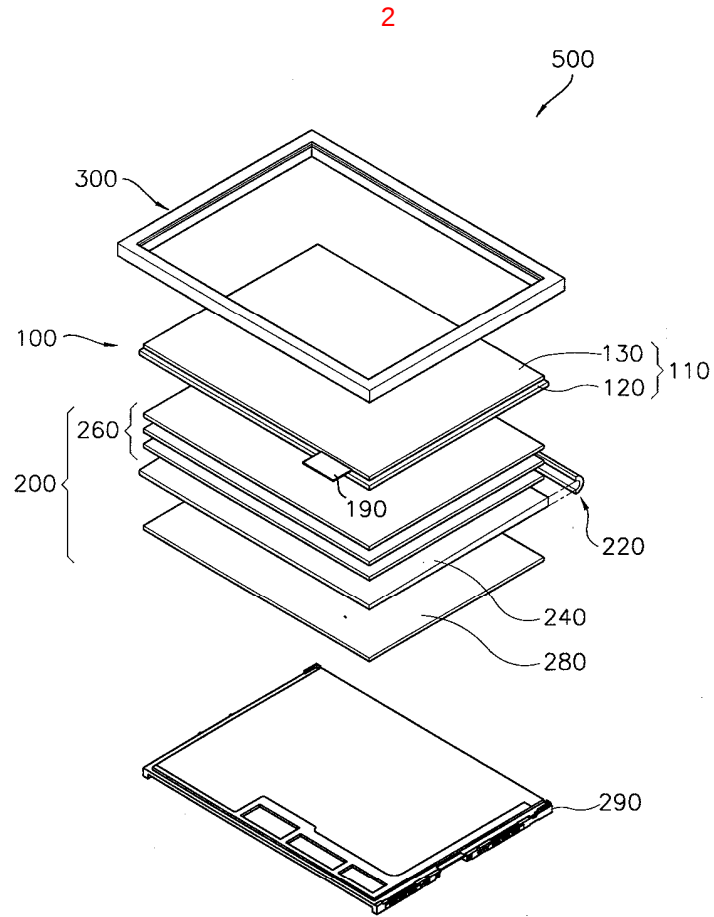
8.

6 , , a-Si NMOS TFT

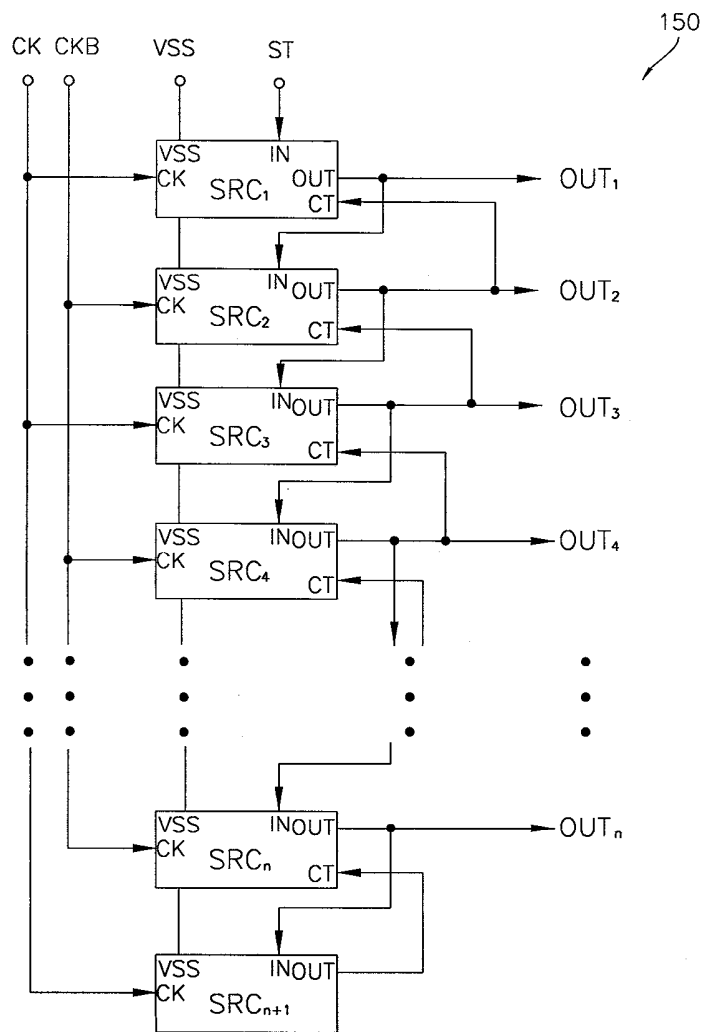
9.

6 , 1 2 1 2

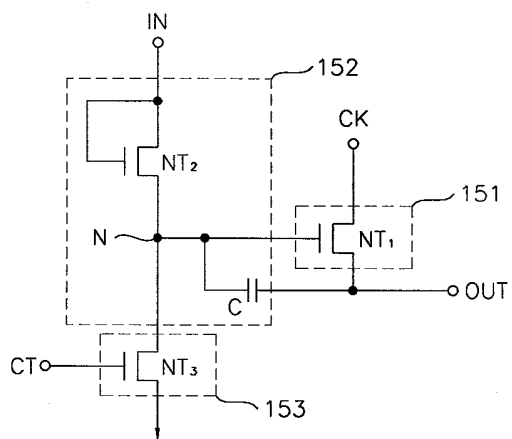




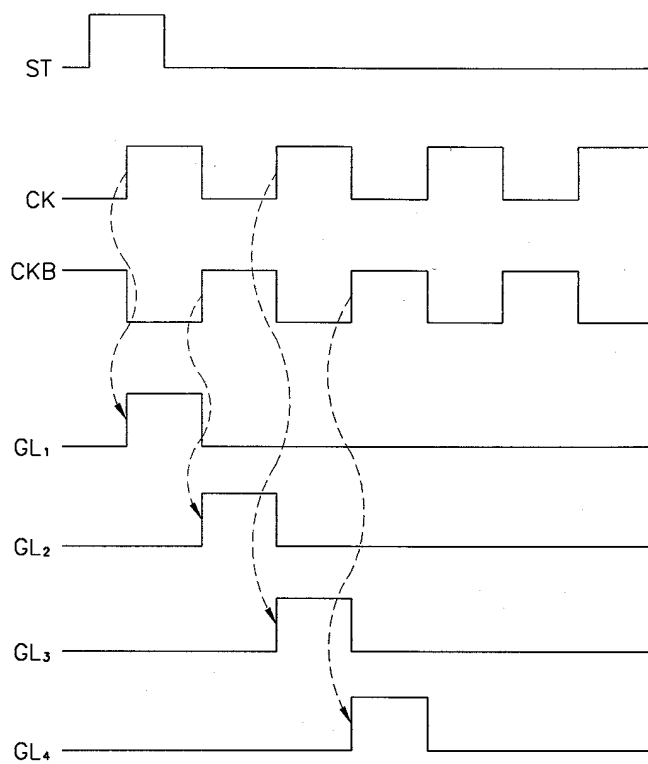
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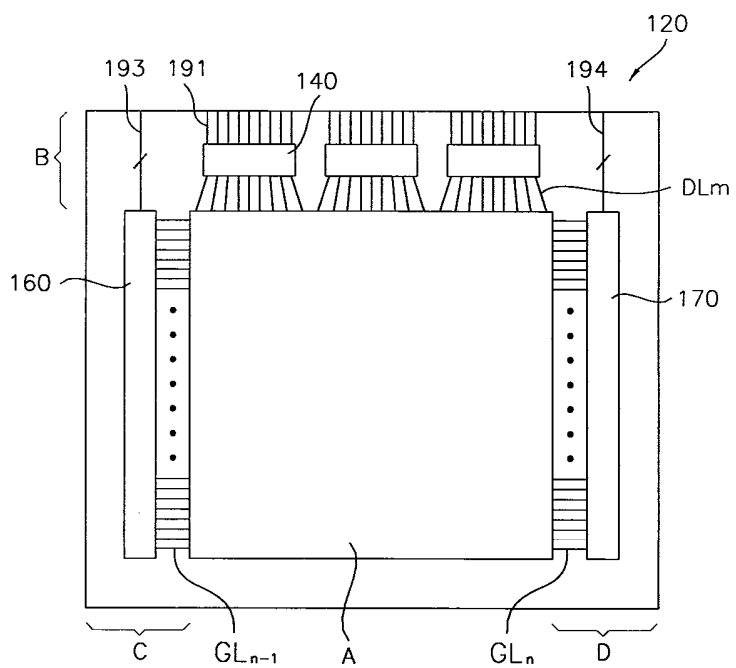
5

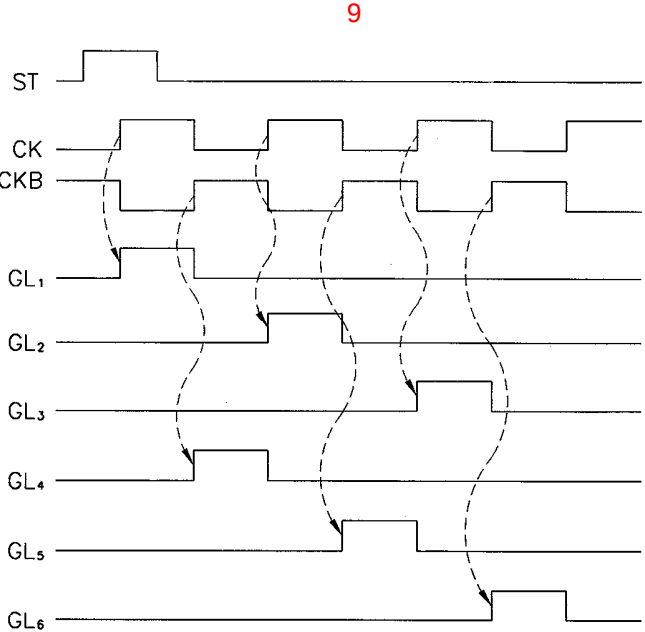
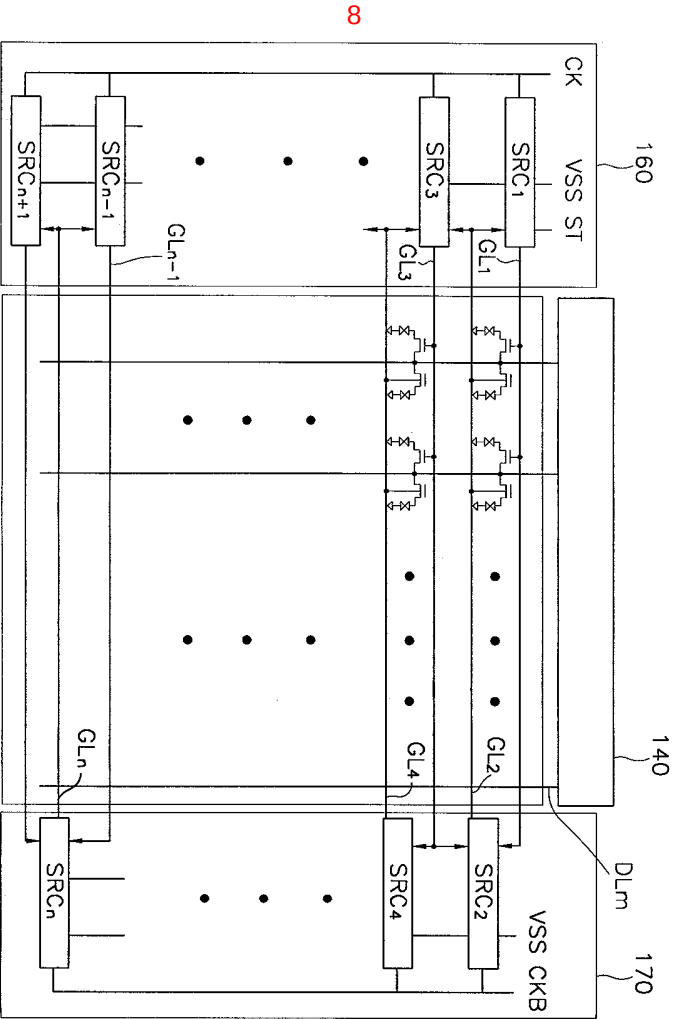


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专利名称(译)	移位寄存器和具有它的液晶显示器件		
公开(公告)号	KR1020030055845A	公开(公告)日	2003-07-04
申请号	KR1020010085957	申请日	2001-12-27
[标]申请(专利权)人(译)	三星电子株式会社		
申请(专利权)人(译)	三星电子有限公司		
当前申请(专利权)人(译)	三星电子有限公司		
[标]发明人	LEE HYONGGON 이형곤		
发明人	이형곤		
IPC分类号	G02F1/133		
代理人(译)	PARK , YOUNG WOO		
其他公开文献	KR100830903B1		
外部链接	Espacenet		

摘要(译)

用途：提供移位寄存器和LCD（液晶显示器件）以确保可靠性并最小化尺寸和功耗。组成：栅极驱动电路（150）通过集成在LCD面板上顺序地将扫描脉冲馈送到多条栅极线。栅极驱动电路包括一个移位寄存器。移位寄存器包括上拉单元，上拉驱动单元和下拉单元。上拉单元向栅极线提供时钟信号。上拉驱动单元通过响应前级的输出信号来驱动上拉单元。下拉单元通过响应下一级的输出信号向输出端子提供电源电压。因此，LCD确保了可靠性并最小化了尺寸和功耗。

