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(72) Inventor: **Kwon, Oh-Kyong**
Seoul, 138-240 (KR)

(74) Representative: **Riebling, Peter, Dr.-Ing.**
Patentanwalt
Postfach 31 60
88113 Lindau (DE)

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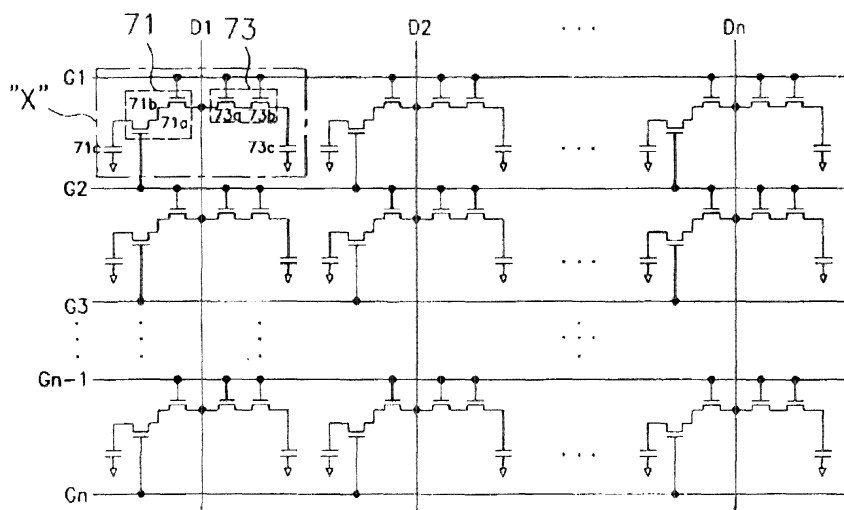
(71) Applicant: **Kwon, Oh-Kyong**
Seoul, 138-240 (KR)

(54) **Liquid crystal display**

(57) There is provided a liquid crystal display and a circuit for driving the same, having a higher resolution and being able to be manufactured at low cost. The liquid crystal display having first and second plates and a liquid crystal being sealed therebetween includes: a plurality of scanning lines arranged on the first plate in one direction; a plurality of data lines arranged on the first

plate, intersecting the scanning lines; first and second pixel regions, located at both sides of each data line, respectively; a first switch for selectively transmitting a video signal loaded on a corresponding data line to the first pixel region; and a second switch for selectively transmitting the video signal loaded on the data line to the second pixel region.

FIG.5A





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EUROPEAN SEARCH REPORT

Application Number
EP 00 11 2044

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
X	PATENT ABSTRACTS OF JAPAN vol. 1996, no. 09, 30 September 1996 (1996-09-30) & JP 08 136909 A (SHARP CORP), 31 May 1996 (1996-05-31) * abstract *	1	G09G3/36
P, X	-& US 5 936 596 A (YOSHIDA ET AL.) 10 August 1999 (1999-08-10) * column 12, line 43 - line 65; figure 11 *	1	
A	US 5 495 353 A (YAMAZAKI ET AL.) 27 February 1996 (1996-02-27) * column 11, line 1 - line 20; figure 9A *	1,5	
A	EP 0 302 468 A (NIPPON TELEGRAPH & TELEPHONE) 8 February 1989 (1989-02-08) * abstract *	1,5	
A	EP 0 293 048 A (PHILIPS) 30 November 1988 (1988-11-30) * column 2, line 27 - column 4, line 52 *	1,5	TECHNICAL FIELDS SEARCHED (Int.Cl.7)
A	US 5 313 222 A (LEE) 17 May 1994 (1994-05-17) * column 1, line 53 - column 2, line 9 * * column 3, line 12 - line 68; figure 2 *	1,5	G09G
A	EP 0 368 572 A (SHARP) 16 May 1990 (1990-05-16) * column 29 - column 30, line 30 * * column 38 - column 40 *	1,5	
A	US 4 822 142 A (YASUI) 18 April 1989 (1989-04-18) * column 6, line 35 - column 7, line 23; figure 8 *	1,5	
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The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 26 February 2001	Examiner Lange, J
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	

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European Patent
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EUROPEAN SEARCH REPORT

Application Number
EP 00 11 2044

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
A	EP 0 686 960 A (CANON) 13 December 1995 (1995-12-13) * column 17, line 15 - column 18, line 19 *	1,5	
A	US 5 648 792 A (SATO ET AL.) 15 July 1997 (1997-07-15) * column 2, line 10 - line 28 *	1,5	
A	PATENT ABSTRACTS OF JAPAN vol. 009, no. 099 (E-311), 27 April 1985 (1985-04-27) & JP 59 225683 A (SUWA SEIKOSHA), 18 December 1984 (1984-12-18) * abstract *	1,5	
			TECHNICAL FIELDS SEARCHED (Int.Cl.7)
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 26 February 2001	Examiner Lange, J
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

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26-02-2001

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
JP 08136909 A	31-05-1996	US 5936596 A	10-08-1999
US 5495353 A	27-02-1996	JP 2742725 B	22-04-1998
		JP 4190330 A	08-07-1992
		JP 6337399 A	06-12-1994
		US 5612799 A	18-03-1997
		US 5905555 A	18-05-1999
		US 5899547 A	04-05-1999
		US 5946059 A	31-08-1999
		EP 0488643 A	03-06-1992
		KR 9501360 B	17-02-1995
		KR 9604152 B	27-03-1996
EP 0302468 A	08-02-1989	JP 1037585 A	08-02-1989
		JP 1821546 C	10-02-1994
		JP 5027115 B	20-04-1993
		DE 3868766 A	09-04-1992
		US 5012228 A	30-04-1991
EP 0293048 A	30-11-1988	GB 2205191 A	30-11-1988
		JP 63311388 A	20-12-1988
		US 4931787 A	05-06-1990
US 5313222 A	17-05-1994	AT 182228 T	15-07-1999
		AU 671181 B	15-08-1996
		AU 5569894 A	19-07-1994
		BR 9307740 A	31-08-1999
		CA 2150223 A	07-07-1994
		CN 1090652 A, B	10-08-1994
		DE 69325666 D	19-08-1999
		DE 69325666 T	24-02-2000
		DK 676078 T	21-02-2000
		EP 0676078 A	11-10-1995
		ES 2138655 T	16-01-2000
		WO 9415327 A	07-07-1994
		GR 3031175 T	31-12-1999
		JP 2996428 B	27-12-1999
		JP 6347754 A	22-12-1994
		RU 2121170 C	27-10-1998
EP 0368572 A	16-05-1990	JP 2126285 A	15-05-1990
		JP 2170784 A	02-07-1990
		DE 68923683 D	07-09-1995
		DE 68923683 T	15-02-1996
		KR 9209029 B	12-10-1992
		US 5192945 A	09-03-1993

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The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

26-02-2001

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 4822142 A	18-04-1989	NONE	
EP 0686960 A	13-12-1995	JP 8054861 A	27-02-1996
		KR 224536 B	15-10-1999
		US 6072457 A	06-06-2000
US 5648792 A	15-07-1997	JP 7253767 A	03-10-1995
		KR 142131 B	15-07-1998
JP 59225683 A	18-12-1984	NONE	

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专利名称(译)	液晶显示器		
公开(公告)号	EP1058233A3	公开(公告)日	2001-04-18
申请号	EP2000112044	申请日	2000-06-02
[标]申请(专利权)人(译)	KWON OH KYONG		
申请(专利权)人(译)	KWON , OH-KYONG		
当前申请(专利权)人(译)	SAMSUNG ELECTRONICS CO. LTD.		
[标]发明人	KWON OH KYONG		
发明人	KWON, OH-KYONG		
IPC分类号	G02F1/133 G09F9/30 G09G3/20 G09G3/36		
CPC分类号	G09G3/3677 G09G3/3614 G09G3/3648 G09G3/3659 G09G3/3688 G09G2300/0814 G09G2310/0251 G09G2310/027 G09G2310/0297 G09G2310/06		
优先权	1019990020721 1999-06-04 KR		
其他公开文献	EP1058233A2		
外部链接	Espacenet		

摘要(译)

提供了一种液晶显示器和用于驱动该液晶显示器的电路，具有更高的分辨率并且能够以低成本制造。具有第一和第二板以及密封在其间的液晶的液晶显示器包括：沿一个方向布置在第一板上的多条扫描线；多条数据线设置在第一板上，与扫描线交叉；第一和第二像素区域，分别位于每条数据线的两侧；第一开关，用于选择性地加载在相应数据线上的视频信号发送到第一像素区域；第二开关，用于选择性地加载在数据线上的视频信号传输到第二像素区域。

FIG.5A

