



Europäisches Patentamt
European Patent Office
Office européen des brevets



(11) **EP 1 152 390 A3**

(12) **EUROPEAN PATENT APPLICATION**

(88) Date of publication A3:
17.05.2006 Bulletin 2006/20

(51) Int Cl.:
G09G 3/36^(2006.01)

(43) Date of publication A2:
07.11.2001 Bulletin 2001/45

(21) Application number: **01304005.0**

(22) Date of filing: **02.05.2001**

(84) Designated Contracting States:
**AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU
MC NL PT SE TR**
Designated Extension States:
AL LT LV MK RO SI

(30) Priority: **04.05.2000 GB 0010825**

(71) Applicants:
• **VARINTELLIGENT (BVI) LIMITED**
Tortola,
British Virgin Islands (VG)
• **JOHNSON, Terence Leslie**
London EC4A 1BX (GB)

(72) Inventors:
• **Yeung, Steve Wai Leung**
Tseun Kwan O,
Hong Kong (HK)

• **Lam, Berry S.K.**
Tseun Kwan O,
Hong Kong (HK)
• **Lo, Patrick P.C.**
Tseun Kwan O,
Hong Kong (HK)
• **Lee, Richard C.H.**
Tseun Kwan O,
Hong Kong (HK)
• **Leung, C.C.**
Tseun Kwan O,
Hong Kong (HK)
• **Yeung, M.T.**
Tseun Kwan O,
Hong Kong (HK)

(74) Representative: **Johnson, Terence Leslie**
Marks & Clerk
90 Long Acre
London, WC2E 9RA (GB)

(54) **Matrix driving schemes for cholesteric liquid crystal displays**

(57) The invention relates to a method of driving an LCD, comprising providing an array of pixels, characterised by the steps of providing cholesteric liquid crystals arranged between spaced transparent substrates, and by providing a reset pulse and a plurality of selection pulses whereby to provide resultant driving waveform(s).

Thus the driving schemes or methods shown consist of a reset phase and a selection phase, the pulses of the latter being equipped with freedom in the multiplicity of the selection pulses. These schemes provide gray scale capability and improved optional performance. Inversions of waveform are used.

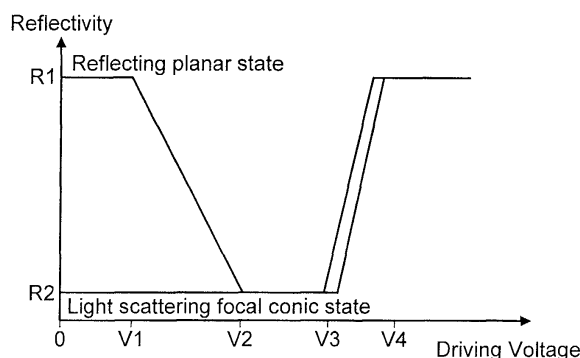


FIG. 1



European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 01 30 4005

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	US 5 418 634 A (KANBE ET AL) 23 May 1995 (1995-05-23) * abstract * * column 14, line 3 - line 47 * * column 24, line 17 - line 30; figures 8B,9,18b *	1-19	G09G3/36
A	----- EP 0 957 394 A (MINOLTA CO., LTD) 17 November 1999 (1999-11-17) * abstract * * column 2, paragraph 5 * * column 13, paragraph 46 - paragraph 47 * -----	1	
			TECHNICAL FIELDS SEARCHED (IPC)
			G09G
The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 23 March 2006	Examiner Gonzalez Ordonez, O
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			

1
EPO FORM 1503 03.82 (P04C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 01 30 4005

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

23-03-2006

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 5418634	A	23-05-1995	NONE	

EP 0957394	A	17-11-1999	JP 3713954 B2	09-11-2005
			JP 11326871 A	26-11-1999

专利名称(译)	胆甾型液晶显示器的矩阵驱动方案		
公开(公告)号	EP1152390A3	公开(公告)日	2006-05-17
申请号	EP2001304005	申请日	2001-05-02
[标]申请(专利权)人(译)	JOHNSON TERENCE LESLIE		
申请(专利权)人(译)	VARINTELLIGENT (BVI) LIMITED JOHNSON , TERENCE LESLIE		
当前申请(专利权)人(译)	VARINTELLIGENT (BVI) LIMITED JOHNSON , TERENCE LESLIE		
[标]发明人	YEUNG STEVE WAI LEUNG LAM BERRY S K LO PATRICK P C LEE RICHARD C H LEUNG C C YEUNG M T		
发明人	YEUNG, STEVE WAI LEUNG LAM, BERRY S.K. LO, PATRICK P.C. LEE, RICHARD C.H. LEUNG, C.C. YEUNG, M.T.		
IPC分类号	G09G3/36 G02F1/133 G09G3/20		
CPC分类号	G09G3/3629 G09G2300/023 G09G2300/0486 G09G2310/061 G09G2310/063 G09G2310/065		
代理机构(译)	JOHNSON , TERENCE LESLIE		
优先权	2000010825 2000-05-04 GB		
其他公开文献	EP1152390A2		
外部链接	Espacenet		

摘要(译)

本发明涉及一种驱动LCD的方法，包括提供像素阵列，其特征在于提供设置在间隔开的透明基板之间的胆甾型液晶的步骤，以及通过提供复位脉冲和多个选择脉冲从而提供合成驱动的步骤。波形（S）。因此，所示的驱动方案或方法包括复位阶段和选择阶段，后者的脉冲配备有多个选择脉冲的自由度。这些方案提供灰度功能和改进的可选性能。使用波形的反转。

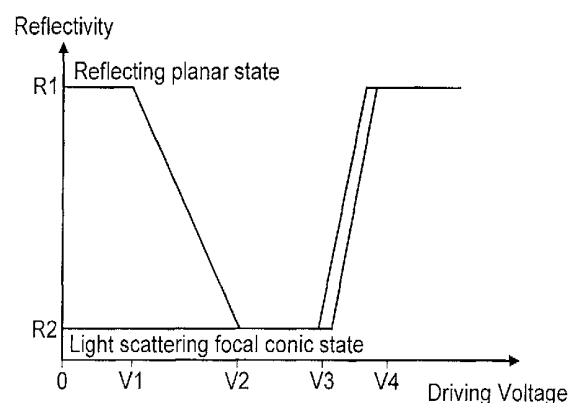


FIG. 1