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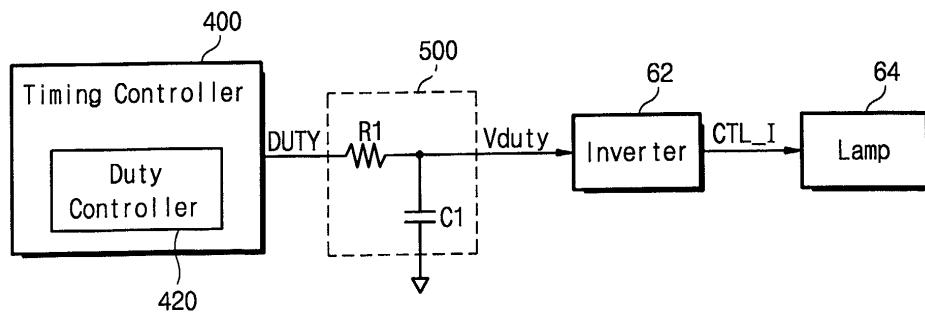
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(54) **Apparatus and method for automatic brightness control of the backlight for use in a liquid crystal display device**

(57) An LCD device having a backlight generates a backlight brightness control signal in response to a duty rate signal corresponding to an average gray level or/and a color state of image data to be displayed on the LCD

device and a brightness control voltage generated from the main body of the computer by user, and controls a brightness of the backlight automatically according to the backlight brightness control signal.

### Fig. 3





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Y	* abstract * * column 1, line 31 - line 38 * * column 1, line 65 - line 67 * * column 2, line 18 - line 28 * * column 3, line 1 - column 5, line 19; figures 1-3 * * column 12, line 24 - line 65; figures 6-11 * -----	3,4,18	
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7	The present search report has been drawn up for all claims		
Place of search		Date of completion of the search	Examiner
Munich		1 October 2007	Corsi, Fabio
CATEGORY OF CITED DOCUMENTS			
X : particularly relevant if taken alone		T : theory or principle underlying the invention	
Y : particularly relevant if combined with another document of the same category		E : earlier patent document, but published on, or after the filing date	
A : technological background		D : document cited in the application	
O : non-written disclosure		L : document cited for other reasons	
P : intermediate document		& : member of the same patent family, corresponding document	



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Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
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The present search report has been drawn up for all claims			
7	Place of search Munich	Date of completion of the search 1 October 2007	Examiner Corsi, Fabio
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			



DOCUMENTS CONSIDERED TO BE RELEVANT			CLASSIFICATION OF THE APPLICATION (IPC)
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
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Y	----- -/-	16,20	TECHNICAL FIELDS SEARCHED (IPC)
The present search report has been drawn up for all claims			TECHNICAL FIELDS SEARCHED (IPC)
7	Place of search Munich	Date of completion of the search 1 October 2007	Examiner Corsi, Fabio
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X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background C : 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			



DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
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<p>7</p> <p>The present search report has been drawn up for all claims</p>			
Place of search	Date of completion of the search	Examiner	
Munich	1 October 2007	Corsi, Fabio	
CATEGORY OF CITED DOCUMENTS		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	
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			

**CLAIMS INCURRING FEES**

The present European patent application comprised at the time of filing more than ten claims.

Only part of the claims have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims and for those claims for which claims fees have been paid, namely claim(s):

No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims.

**LACK OF UNITY OF INVENTION**

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

see sheet B

All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.

As all searchable claims could be searched without effort justifying an additional fee, the Search Division did not invite payment of any additional fee.

Only part of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid, namely claims:

None of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims, namely claims:



The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

1. claims: 1-18

LCD device with automatic control of backlight brightness  
based on average image grey level and on user operation

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2. claims: 19-26

LCD device with automatic control of backlight brightness  
based on image pixel colour

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

EP 01 30 9446

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.

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专利名称(译)	用于液晶显示装置的背光的自动亮度控制的装置和方法		
公开(公告)号	<a href="#">EP1223570A3</a>	公开(公告)日	2007-11-07
申请号	EP2001309446	申请日	2001-11-07
[标]申请(专利权)人(译)	三星电子株式会社		
申请(专利权)人(译)	SAMSUNG ELECTRONICS CO. LTD.		
当前申请(专利权)人(译)	三星DISPLAY CO. , LTD.		
[标]发明人	MOON SEUNG HWAN KIM SANG SOO PARK DONG WON CHOI HYEONG BAE		
发明人	MOON, SEUNG-HWAN KIM, SANG-SOO PARK, DONG-WON CHOI, HYEONG-BAE		
IPC分类号	G09G3/34 G02F1/133 G09G3/20 G09G3/36 H04N5/66 H05B41/40 H05B41/42		
CPC分类号	G09G3/3406 G09G3/2011 G09G3/3413 G09G2320/0238 G09G2320/0276 G09G2320/0606 G09G2320/0613 G09G2320/064 G09G2320/0653 G09G2330/021 G09G2360/16		
优先权	1020000085540 2000-12-29 KR 1020010026136 2001-05-14 KR		
其他公开文献	EP1223570A2 EP1223570B1		
外部链接	<a href="#">Espacenet</a>		

## 摘要(译)

具有背光的LCD装置响应于与要在LCD装置上显示的图像数据的平均灰度级和/或颜色状态相对应的占空比信号以及从主装置产生的亮度控制电压而产生背光亮度控制信号。用户的身体，根据背光亮度控制信号自动控制背光的亮度。

Fig. 3

