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(72) Inventors:
• **Liu, Shuangfei**
100176 Beijing (CN)
• **Zhong, Jian**
100176 Beijing (CN)

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(74) Representative: **Michalski, Stefan**
Michalski Hüttermann & Partner
Patentanwälte
Speditionstraße 21
40221 Düsseldorf (DE)

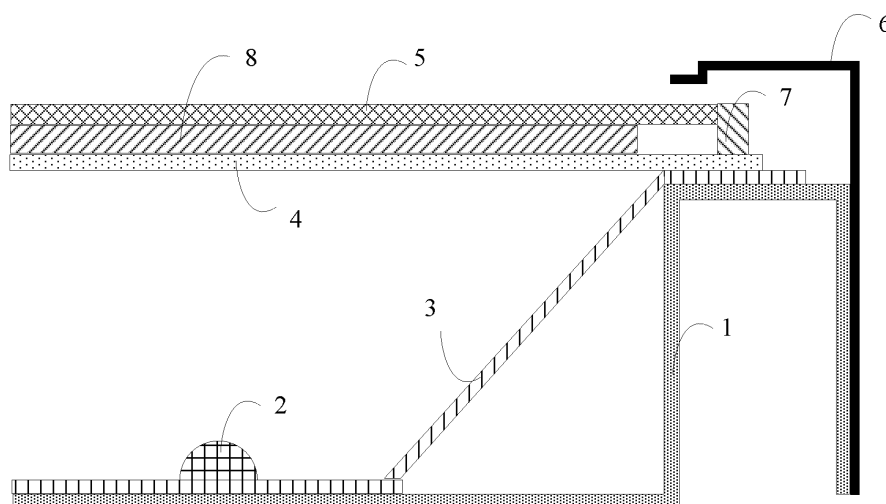
(71) Applicant: **Boe Technology Group Co. Ltd.**
Beijing 100015 (CN)

(54) **Backlight module and liquid crystal display**

(57) The present invention belongs to a field of liquid crystal display technical, and relates to a backlight module and a liquid crystal display. The backlight module includes a backplane and a light source arranged on the backplane, and further includes a position-limiting unit. The position-limiting unit is arranged on the backplane, and is capable of limiting a liquid crystal panel at a set position. The backlight module according to the present invention is a direct-type backlight module. The advan-

tageous effects of the present invention are as follows: as compared with a direct-type backlight module in the prior art in which a plastic frame is used to fix positions of respective components, the backlight module according to the present invention reduces the cost of the backlight module effectively and enables assembling of the backlight module to be easy due to employing a configuration without a plastic frame.

FIG. 1





EUROPEAN SEARCH REPORT

 Application Number
 EP 13 19 8290

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 2012/188479 A1 (HAN RUI [CN]) 26 July 2012 (2012-07-26)	1,13	INV. G02F1/1335 G02F1/1333
A	* Third embodiment; figure 7 *	2-5	
X	US 2004/207773 A1 (KAO HUNG CHEN [TW]) 21 October 2004 (2004-10-21) * figures 2,3 * * and the corresponding text passages *	1-5,13	
X	EP 2 538 268 A1 (LG INNOTEK CO LTD [KR]) 26 December 2012 (2012-12-26) * and the corresponding text passages; figure 2 *	1,6,7,9, 11,12 8	
X	US 2012/081351 A1 (YOKOTA MASASHI [JP]) 5 April 2012 (2012-04-05) * and the corresponding text passages; figure 5 *	1,10 8	
X	US 2011/141391 A1 (KIM HYUNOK [KR] ET AL) 16 June 2011 (2011-06-16) * the whole document *	1,13,14	TECHNICAL FIELDS SEARCHED (IPC) G02F
The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 24 July 2014	Examiner Lüssem, Georg
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			



Application Number

EP 13 19 8290

CLAIMS INCURRING FEES

The present European patent application comprised at the time of filing claims for which payment was due.

☐ Only part of the claims have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due 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 those claims for which no payment was due.

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 present supplementary 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 (Rule 164 (1) EPC).



**LACK OF UNITY OF INVENTION
SHEET B**

Application Number

EP 13 19 8290

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: 1-5, 13

Backlight module including a backplane and a light source arranged on the backplane, the backlight module further including a position-limiting unit, the position-limiting unit being arranged on the backplane and to be used for limiting a liquid crystal panel to be arranged on the backlight module at a set position, wherein the position-limiting means of the position-limiting unit are further defined.

2. claims: 6-12

Backlight module including a backplane and a light source arranged on the backplane, the backlight module further including a position-limiting unit, the position-limiting unit being arranged on the backplane and to be used for limiting a liquid crystal panel to be arranged on the backlight module at a set position, wherein means for isolating the LC panel from the backlight module are specified.

3. claim: 14

Backlight module including a backplane and a light source arranged on the backplane, the backlight module further including a position-limiting unit, the position-limiting unit being arranged on the backplane and to be used for limiting a liquid crystal panel to be arranged on the backlight module at a set position, wherein a casing for the LCD including the LC panel and the backlight module and the material of said casing are defined.

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

EP 13 19 8290

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.

24-07-2014

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
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For more details about this annex : see Official Journal of the European Patent Office, No. 12/82

专利名称(译)	背光模块和液晶显示器		
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[标]申请(专利权)人(译)	京东方科技集团股份有限公司		
申请(专利权)人(译)	京东方科技集团有限公司.		
当前申请(专利权)人(译)	京东方科技集团有限公司.		
[标]发明人	LIU SHUANGFEI ZHONG JIAN		
发明人	LIU, SHUANGFEI ZHONG, JIAN		
IPC分类号	G02F1/1335 G02F1/1333		
CPC分类号	G02F1/133602 G02F1/133308 G02F1/133606 G02F1/133608 G02F2001/133314 G02F2001/133322 G02F2201/46		
代理机构(译)	MICHALSKI , STEFAN		
审查员(译)	IÜssem , 乔治		
优先权	201210581109.X 2012-12-27 CN		
其他公开文献	EP2749936A2 EP2749936B1		
外部链接	Espacenet		

摘要(译)

本发明属于液晶显示技术领域，涉及一种背光模组和液晶显示器。背光模块包括背板和设置在背板上的光源，还包括位置限制单元。位置限制单元布置在背板上，并且能够将液晶面板限制在设定位置。根据本发明的背光模块是直下式背光模块。本发明的有益效果如下：与现有技术中直接型背光模组相比，采用塑料框架固定各个元件的位置，本发明的背光模组降低了成本。由于采用不带塑料框架的结构，有效地使背光模块能够组装背光模块。

FIG. 1

