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 (12) (A)

(51) Int. Cl.<sup>7</sup>  
 G02F 1/13357

(11)  
 (43)

10-2005-0005675  
 2005 01 14

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(21) 10-2003-0045694  
 (22) 2003 07 07

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(71) . 20

(72) 642 1 504 1601

2 203 706

(74)

(54)

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, , 가 , 가

가 , 가 ,

1  
2 1  
3  
4 3  
5 1  
6 5  
7 1  
8 7  
9 7  
10 2  
11 10  
12 2

< >

1,100 : 2,102 :  
3,103 : 5,105:  
6,106 : 8,108 :  
10,20 : 11,21 :  
12,112 : 14,114 :  
30,30a,30b,130 : LED 32,32a,32b,132 : PCB  
34,34a,34b,134 : LED 36a,36b :  
38a,38b,238 : 110,210 :  
220 :

## (Back Light Unit)

가

가

1 , 2 1

1 2 , (1) (6) 가 (Support Main)(14) , (14)  
 e Top)(2) (Cas

(6) (5) (3) , (6) (5) (3)  
 , , , , (6) (5) (3)  
 tor : 'TFT' )가 . TFT (Thin Film Transis

, (3) 가 가 ( Tape Carrier Package:TCP)가

, (6) (5) 가 , (3) 가

(14) (Mold) 가 (14) (36a, 36b)  
 (8) (LED 1 (30a, 30b), LED 1 (30a, 30b)  
 (6) (20) 2 (10, 20), (8) (10) (12) ,  
 (6) (36a, 36b) (12) ,  
 (6)

LED(34) LED (30) 3 (PCB' (32) (32) LED(34) ,  
 , LED(34) 1 (10, 20) 2 (10, 20) 1 LED(34) 2 LED(34)  
 0) (10, 20) (10, 20) (10, 20) (10, 20)

LED 1 (30) (12) (8) (6)  
 2 (10, 20) (10, 20) 1 (10) 1 (10)  
 (10) (10, 20) 2 (10, 20) , LED(34) (12) (6) 1  
 (10, 20) (10, 20) (10, 20) (10, 20)

1 2 (10, 20) LED (30a, 30b) (6)

1 2 (10, 20) (15, 25) 1 2 (10, 20) (15, 25)  
 5) 1 2 (10, 20) 1 2 (10, 20) (10, 20) LED (15, 2  
 b) , , , , (d') (30a, 30  
 (6) (8) 1 (10)

(6) 가 (2) (14) . 가 . . , (2)

b) 가 2 , LED (30a, 30b)

LED (30a, 30b) (36a, 36b) LED(34a, 34b), LED(34a, 34b)  
 , LED(34a, 34b) 가 PCB(32a, 32b) . LED(34a, 34b)가 1 2 (10, 20)

LED(34a, 34b) (36a, 36b) 1 2 (10, 20) 1 2  
 (10, 20) . , LED(34a, 34b) , ('d') 가 .  
 , (10, 20) (15, 25) 1 2 (10, 20) 1 2  
 , , ('d')

(1)	가 'd1'	가	1	2	(10, 20)
, 1	(38a)	2	(20)	,	가
LED(34)	(1) (Hold Type)	LED(34)	,	,	(1)
가 LED(34)	LED(34)	,	가	,	, LED(34)
4	,		가	.	
(Blur)	(1)		가	.	

, 가 가

,  
가

, 5 12

5 1 , 6 , 1 (106) , (100) (106) 가 (114) , (114) (11  
4) (102) (106) (105) (103) (105) (106) (103) (105)  
,

Thin Film Transistor : 'TFT' )가 TFT , ( )  
, (103)  
TFT 가  
(Tape Carrier Package) 가

, (106) (105) 가 , (103)  
가  
(108) (114) (106) (106)  
(108) (108) (110), LED (130), LED (130) (130) (106) (112), (110) (106)  
1 LED(134) , LED(134) (100) LED (130) 7 ( ) 'PCB' (132)  
LED(134) LED(134) PCB(132) LED(134) (110)  
LED(134) LED(134) (130) (106) (106) , (110)



10 2 , 11 10  
 2 (100) (200)  
 가  
 10 11 , 2 (200) (206)  
 LED (230) , LED (230) (230) (212) , (210) (206)  
 (210) , LED (208)  
 (208)

LED 12 , LED(234) , LED(234) (206) (210) (206)  
 (230) PCB(232) (234) (234) (234) (232) LED(2)  
 가 PCB(232) (234) (234) (234) (232) LED(2)  
 34) 210) (210) (210) (210) (210) (210) (210)

(210) LED (230) (206) (206) , (210)  
 (210) LED (230) (206) (206) (212) (210) (210)  
 (212) (208) (206) (206) (210) (208) (206) (206)  
 (210) (208) (210) (210) (208) (208) (206) (206)  
 (210) (210) (210) (210) (208) (208) (206) (206)

(210) LED (230) LED (30) LED (230) (1)  
 , (230) 2 (230) (30) (230) (230) ,  
 (210) LED (230) (230) (230) (230) (230) ,

2 (210) (230) (210) (210) (210) (210) (210) (210)  
 LED (230) LED(234) 가 가 (220) 11  
 (220) (210) (210) LED(234) , LED(234) 가 (210) (220) (220)  
 (210) LED (230) (230) (230) (230) (230) ,

, 2 'd1' 2 'd3' (200) (200) (200)  
 , LED(234) (210) (210) (220) (220) (220) (23)  
 8) (210) (210) (210) (210) (210) (210) (210)

2 (100) (200) (200) 1  
 (100) (Flashing) (Scanning Back Light)

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가 가

(57)

1.

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가 가

2.

1

3.

2

4.

1

5.

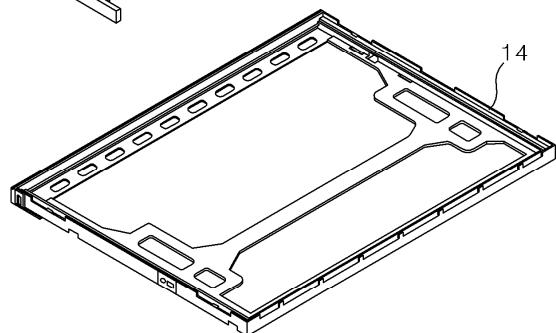
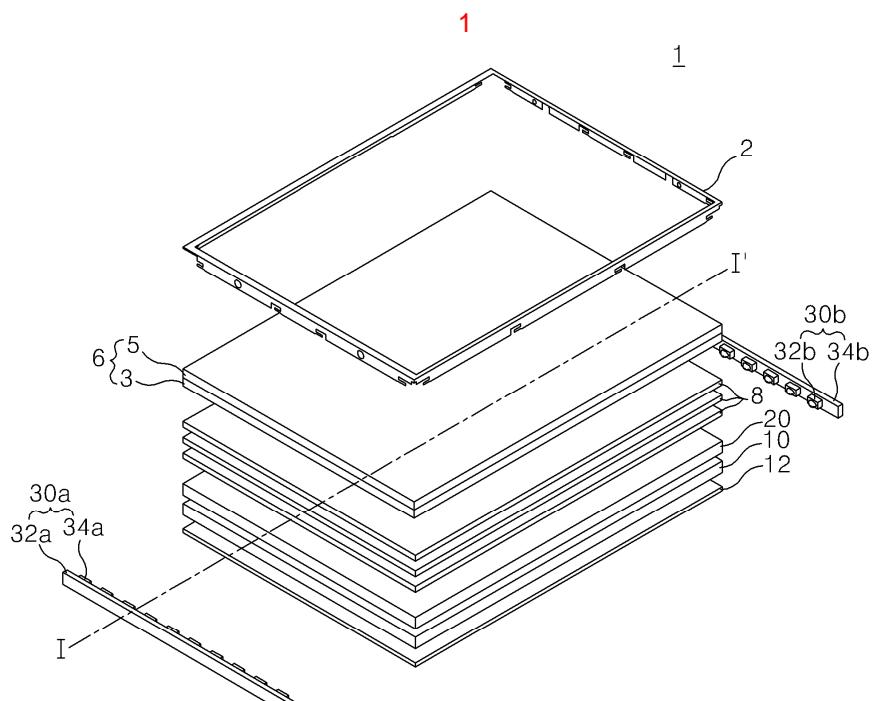
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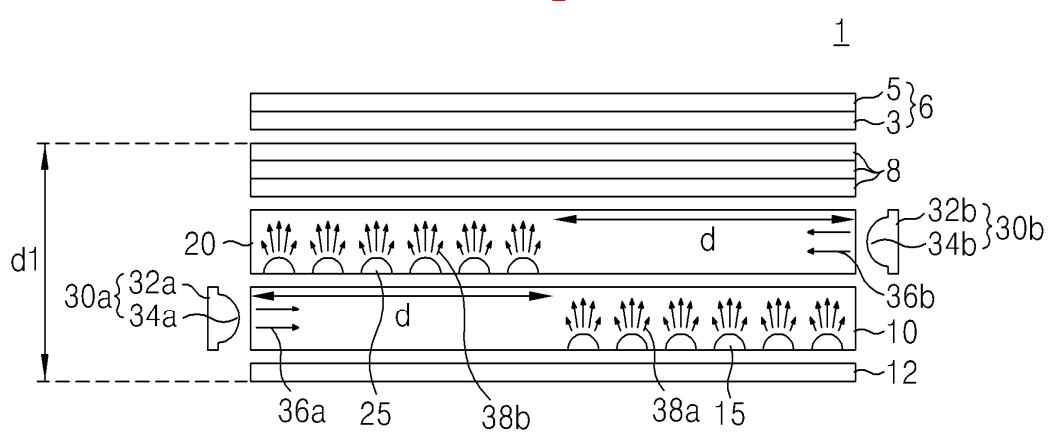
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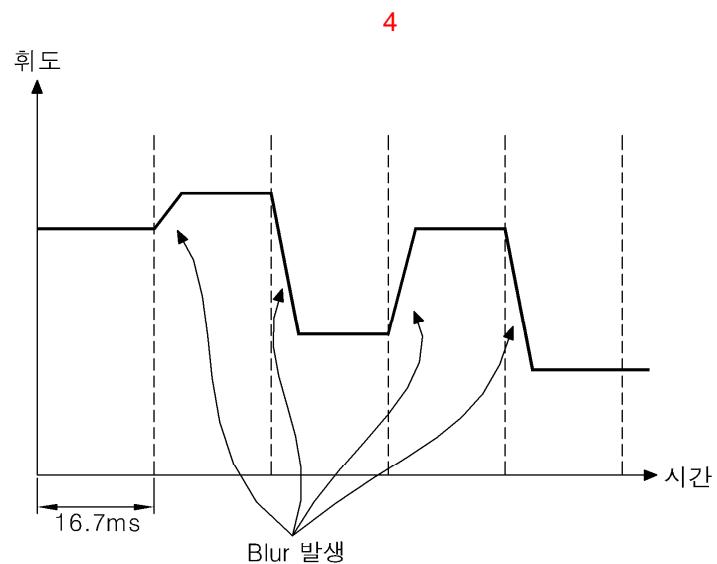
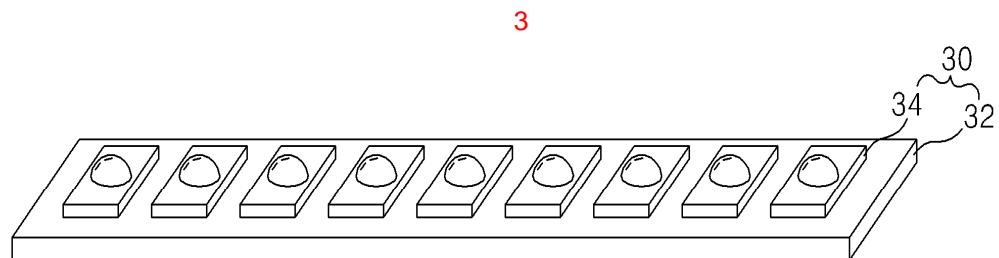
가

7.

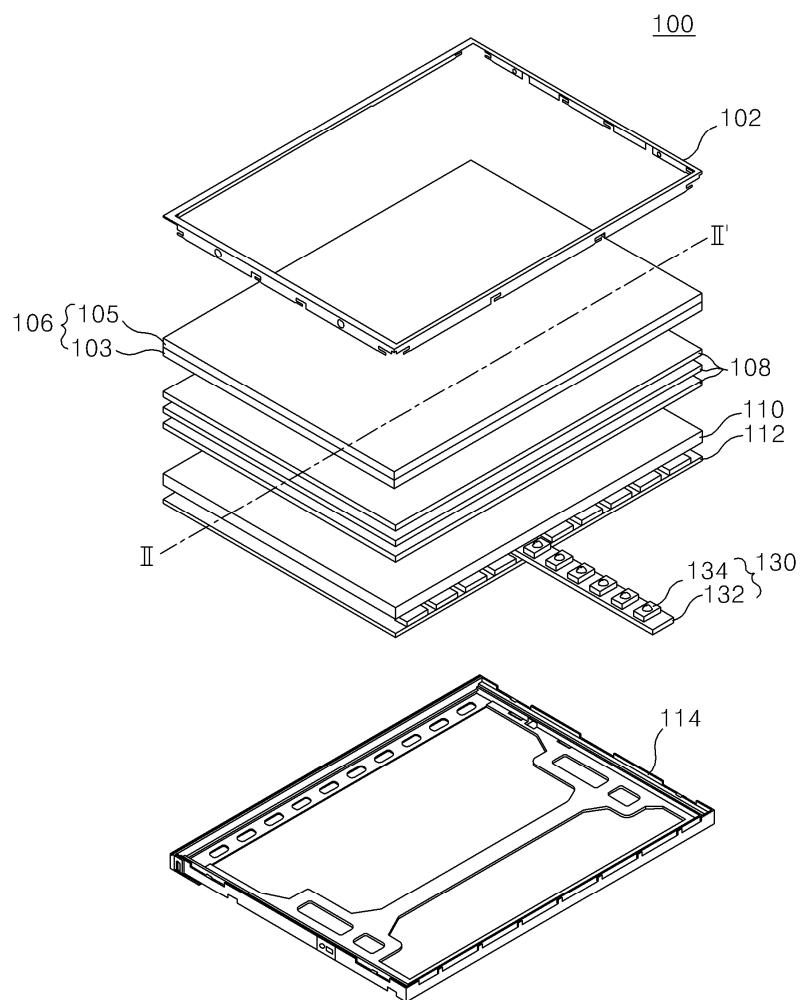


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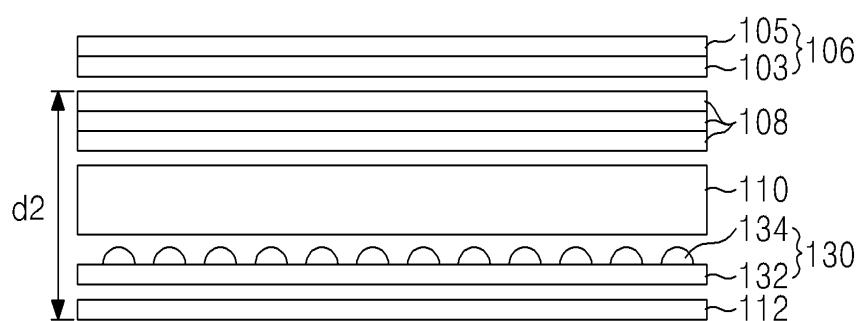


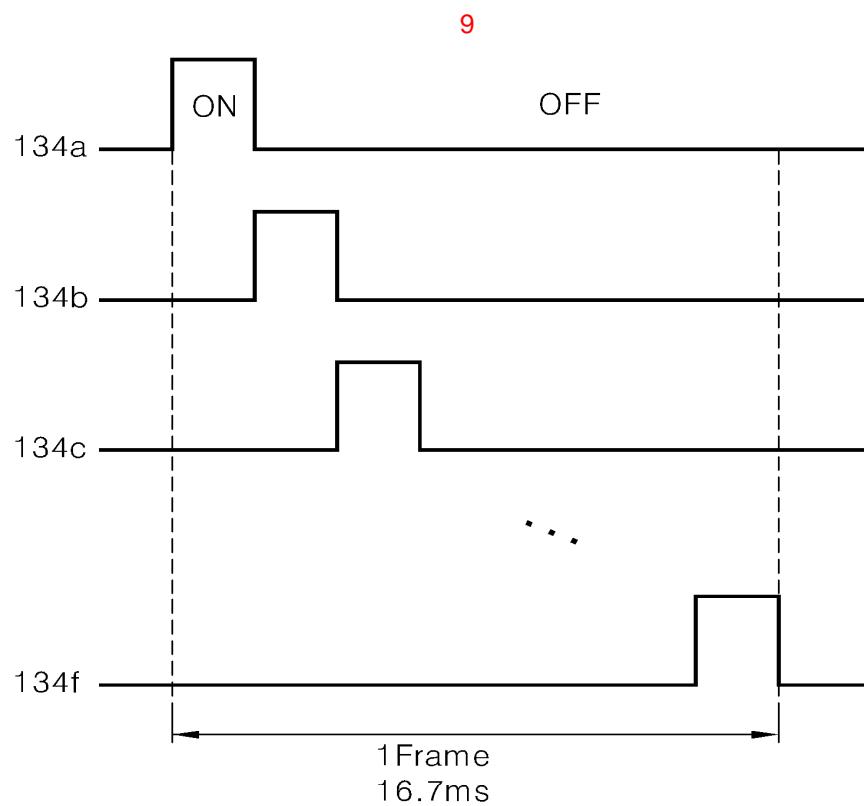
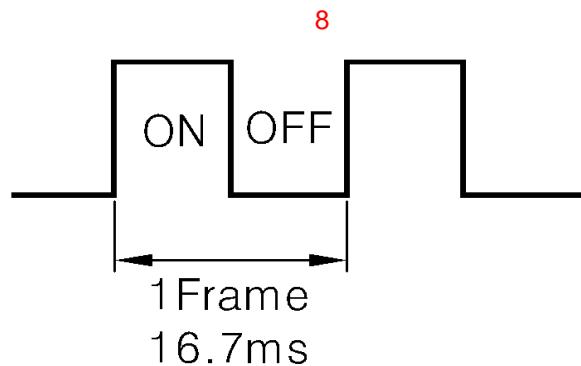
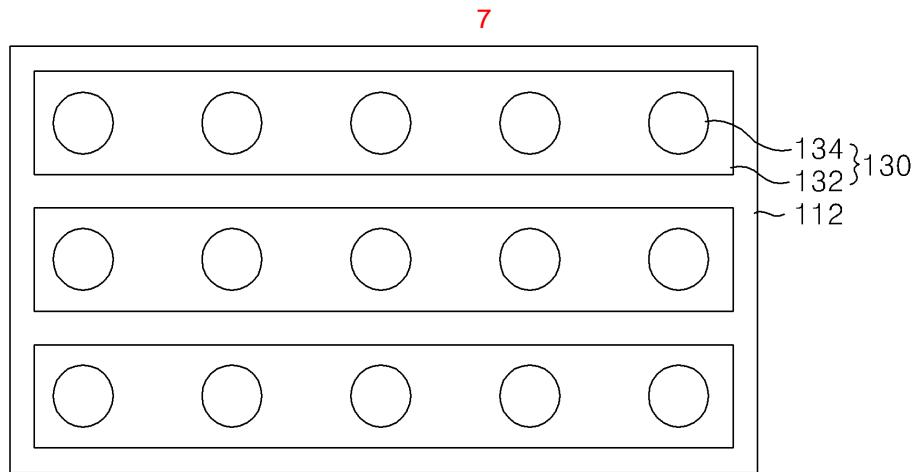


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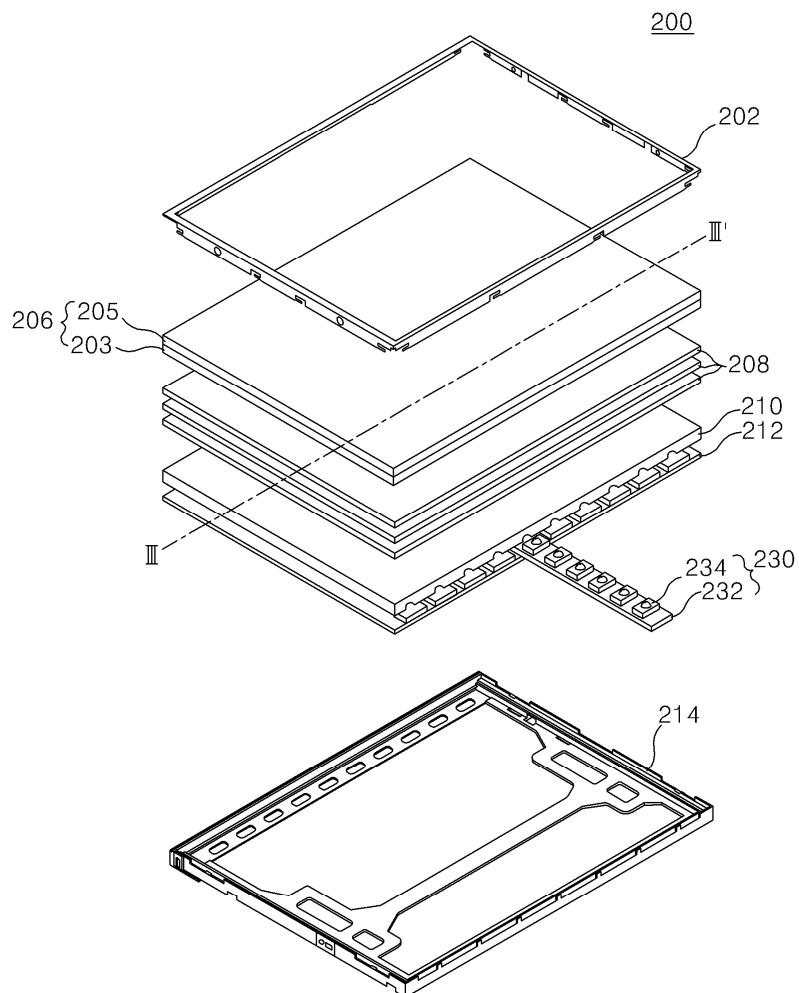


6

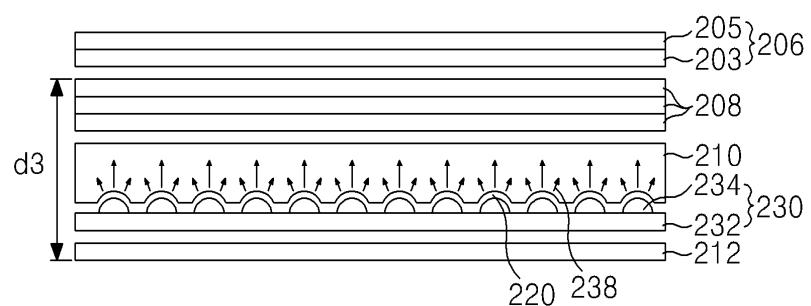




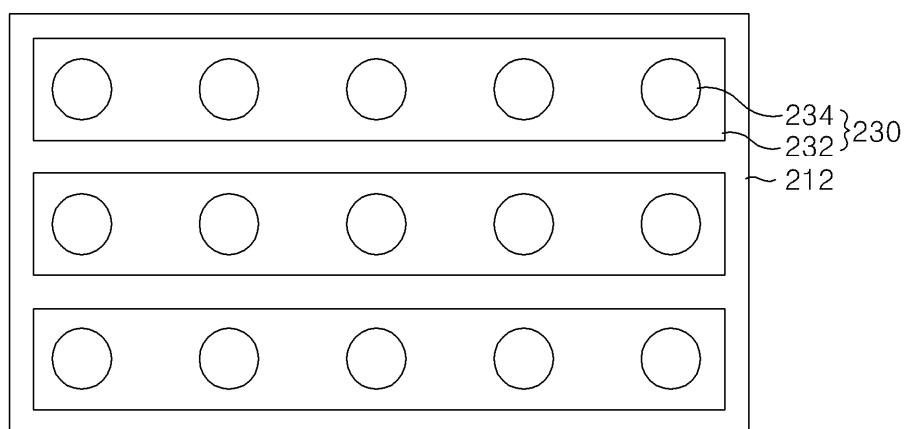
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专利名称(译)	液晶显示模块及其驱动方法		
公开(公告)号	<a href="#">KR1020050005675A</a>	公开(公告)日	2005-01-14
申请号	KR1020030045694	申请日	2003-07-07
[标]申请(专利权)人(译)	乐金显示有限公司		
申请(专利权)人(译)	LG显示器有限公司		
当前申请(专利权)人(译)	LG显示器有限公司		
[标]发明人	HONG HEEJUNG 홍희정 YOU TAEHO 유태호		
发明人	홍희정 유태호		
IPC分类号	G02F1/13357 G09G3/34 G02F1/1335		
CPC分类号	G02F1/133603 G09G3/342 G02F1/133606 G09G2310/024		
代理人(译)	金勇 年轻的小公园		
其他公开文献	<a href="#">KR100995640B1</a>		
外部链接	<a href="#">Espacenet</a>		

### 摘要(译)

液晶显示模块及其驱动方法技术领域本发明涉及一种能够减小厚度和重量并提高显示质量的液晶显示模块及其驱动方法。根据本发明的一个实施方式的液晶显示模块是用于扩散照亮液晶面板，该液晶面板的光，所述光入射来自光源和形成所述光源的扩散板的背表面上的光源的扩散板以及多个凹槽，部件可插入其中。通过这样的结构，根据本发明的一个实施方式的液晶显示模块可以是以能够插入到凹槽，以形成圆形的扩散板的凹槽或多边形背面，从而减小背光单元的厚度的发光二极管。此外，能够以散射从发光二极管发射的光扩散器的槽的形成和提高通过扩散板的液晶显示模块的显示质量为散射光被扩散表示均匀的亮度。根据本发明的模块的特征在于：它包括一个扩散器，用于从用白光照亮该液晶面板这些发光二极管阵列漫射光入射的一个实施方式的液晶显示器，发光二极管阵列的液晶面板。通过这样的结构，该液晶显示模块根据本发明的一个实施例可以使用的发光二极管阵列，其发出白色光作为光源，通过将发光二极管阵列的漫射板的后表面上，以减小背光单元的厚度和重量。 6

