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(54) **LCD MONITOR HAVING MULTIPLE BACKGROUND COLORS**

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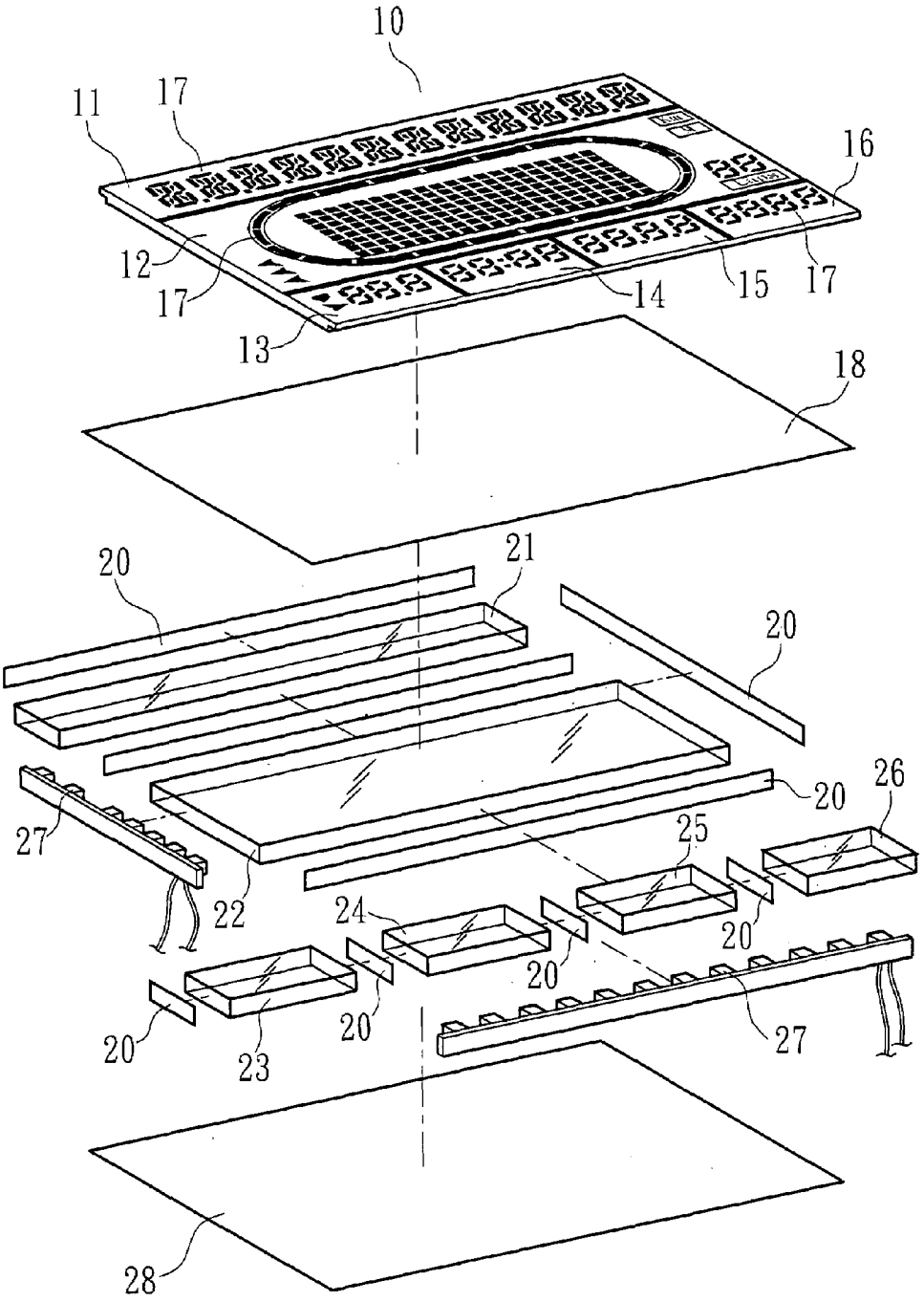
(57) **ABSTRACT**

A LCD monitor, which has multiple light guides matched with a respective LED lamp and peripherally blocked with light blocking filters so that different background colors are shown in different display zones of the LCD panel thereof.



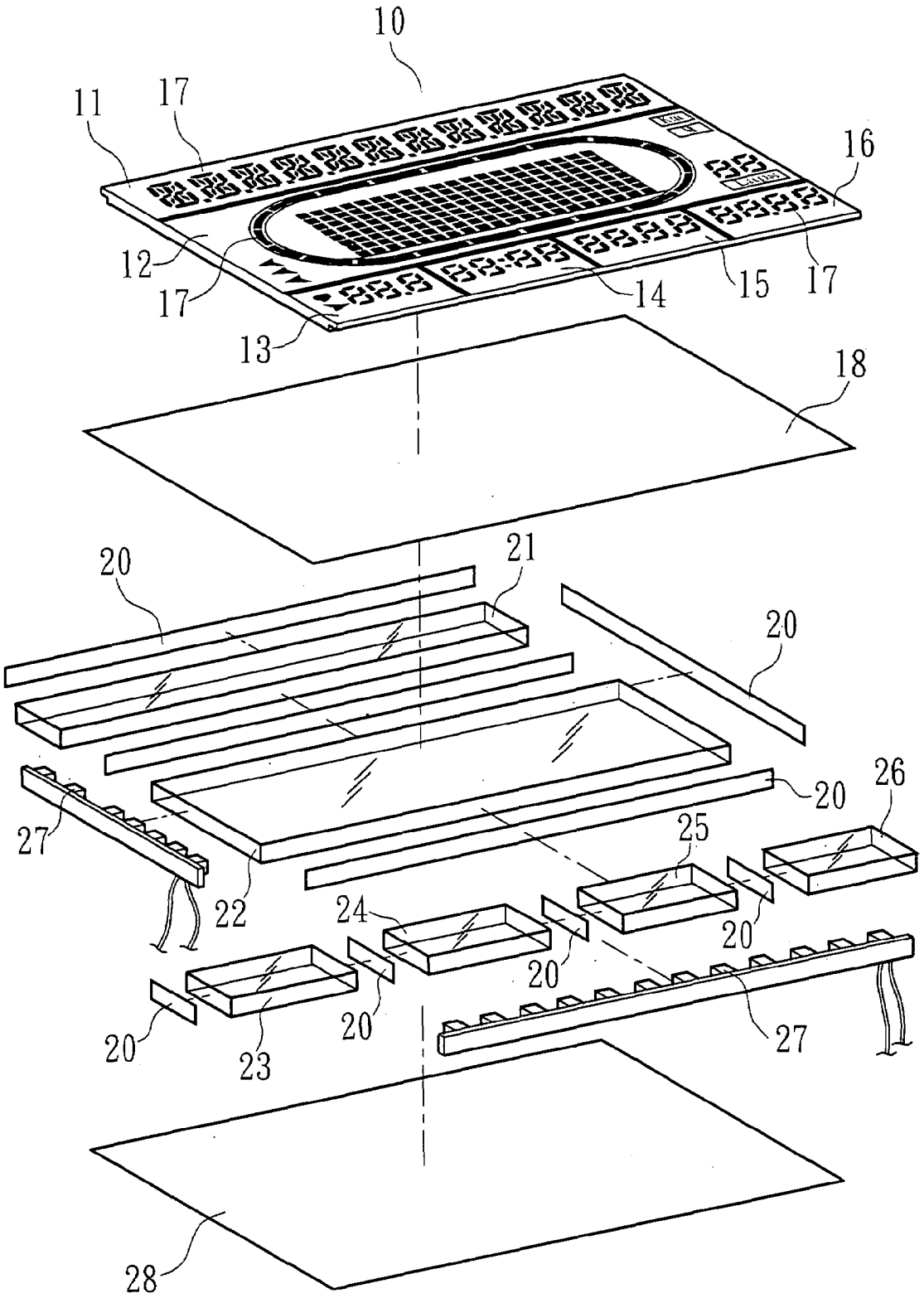

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FIG. 1

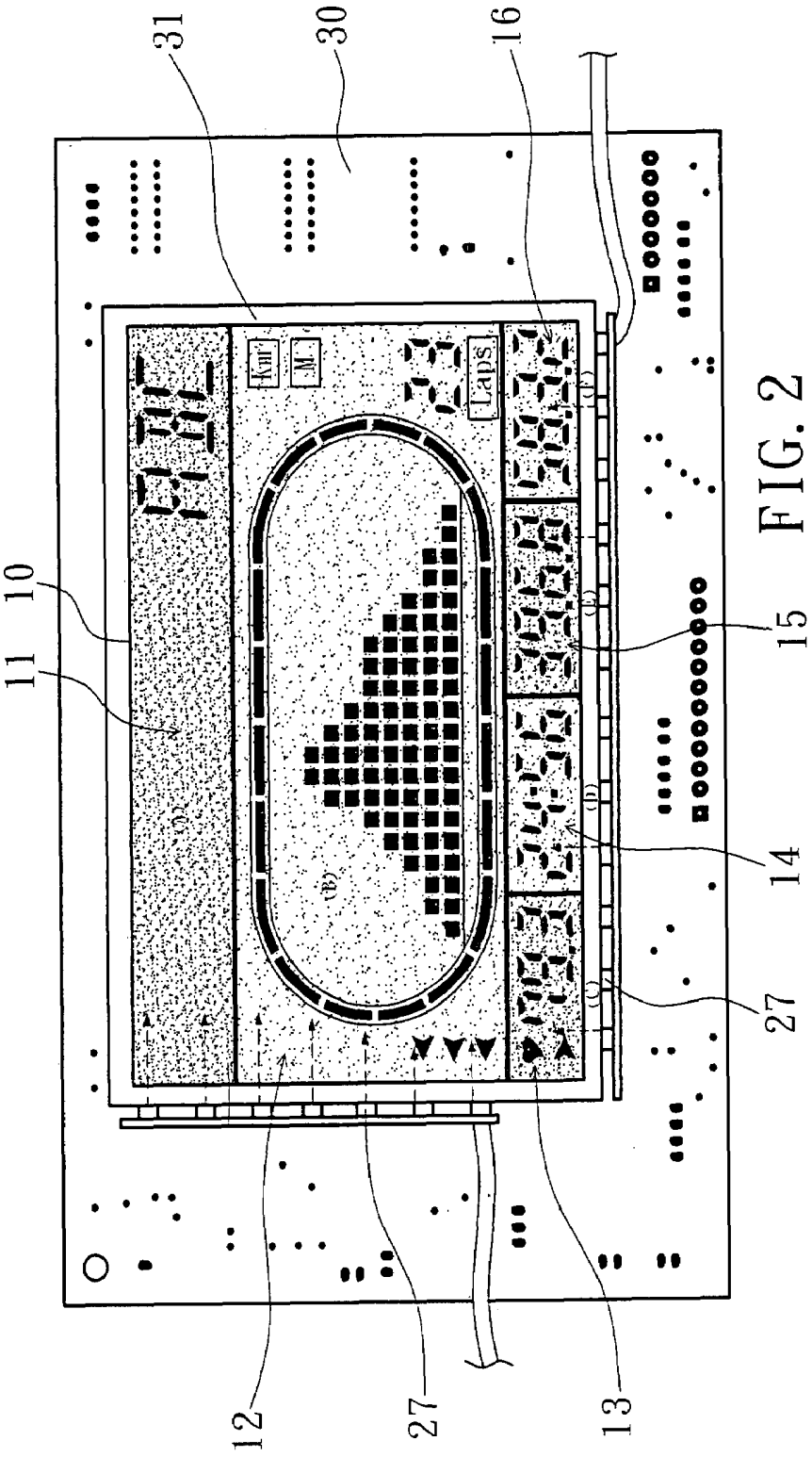
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FIG. 2

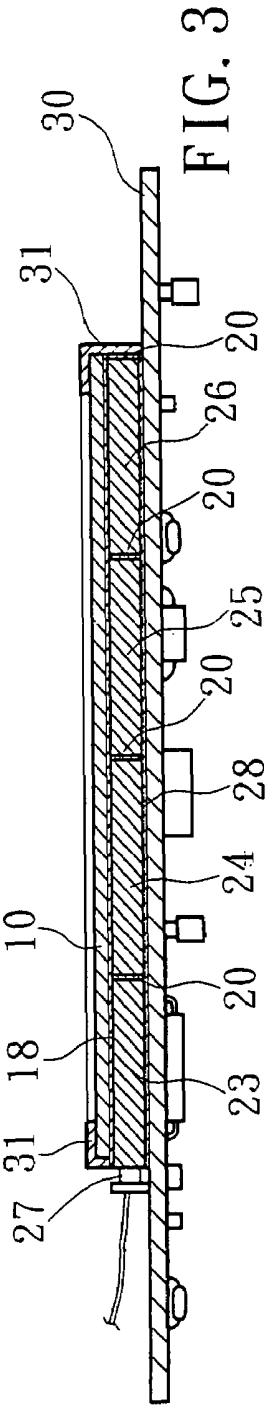
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FIG. 3

LCD MONITOR HAVING MULTIPLE BACKGROUND COLORS

BACKGROUND OF THE INVENTION

[0001] 1. Field of the Invention

[0002] The present invention relates to LCD monitors and more particularly, to a LCD monitor that has multiple background colors.

[0003] 2. Description of the Related Art

[0004] A regular LCD monitor has a reflector at the back side to reflect light from the backlight module, thereby enhancing the background light. However, the whole display panel of a conventional LCD monitor simply provided one background color, light grey or yellow. This monochromic background color is monotonous, showing little visual effect.

SUMMARY OF THE INVENTION

[0005] The present invention has been accomplished under the circumstances in view. It is therefore the main object of the present invention to provide a LCD monitor, which shows different background colors in multiple display zones on the LCD panel. According to the present invention, the LCD monitor comprises a plurality of light guides arranged on a bottom side of a LCD panel thereof, multiple LED (light emitting diode) lamps respectively arranged at one side of each of the light guides and controllable to emit different colors of light to the light guides respectively for showing different background colors in different display zones on the LCD panel, and multiple blocking filters respectively attached to the periphery of the light guides to block the light of the LED lamps in the associating light guides respectively and to prohibit the light of each of the LED lamps from passing out of the associating light guide.

BRIEF DESCRIPTION OF THE DRAWINGS

[0006] FIG. **1** is an exploded view of the preferred embodiment of the present invention.

[0007] FIG. **2** is a front view of the preferred embodiment of the present invention.

[0008] FIG. **3** is a sectional assembly view of the preferred embodiment of the present invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

[0009] Referring to FIGS. **1~3**, a LCD monitor in accordance with the present invention is shown comprising a LCD panel **10**, a plurality of light guides **21~26** arranged on the bottom side of the LCD panel **10**, multiple LED (light emitting diode) lamps **27** respectively arranged at one side of each of the light guides **21~26** and controlled to emit different colors of light to the associating light guides **21~26**, and multiple blocking filters **20** respectively attached to the periphery of the light guides **21~26** to block the light of the associating LED lamp **27** in the associating light guide and to prohibit the light of the associating LED lamp **27** from passing through the other light guides.

[0010] Referring to FIGS. **2** and **3** again, the light guides **21~26**, the blocking filters **20** and the LED lamp **27** are abutted against one another on a same plane, and then covered with a light diffuser film **18** at the top side and a light reflector film **28** at the bottom side, and then the LCD panel **10** is attached to the top side of the light diffuser film **18**, and then the assembly thus obtained is installed in a circuit board **30** and packed in a frame **31**. Thus, the LCD panel **10** and the LED lamps **27** are electrically connected to the circuit board **30**, and the circuit board **30** provides the necessary working voltage to the LCD panel **10** and the LED lamps **27**.

[0011] Further, the LCD panel **10** has multiple display zones **11~16** corresponding to the light guides **21~26**. The display zones **11~16** each has bright dots **17** controllable by the circuit board **30** to display or not to display letters or graphics (because the function of the bright dots of the LCD panel **10** to display or not to display is of the known art and not within the scope of the present invention, no further detailed description in this regard is necessary). For example, the first display zone **11** is adapted to display English letters; the second display zone **12** is adapted to display graphics; the third through sixth display zones **13~16** are adapted to display numerals.

[0012] When the LED lamps **27** are turned on, the light of the LED lamps **27** passes through the associating light guides **21~26**, the light reflector film **28** reflects light toward the light diffuser film **18**, and the light diffuser film **18** diffuses light into the whole area of the LCD panel **10**. Further, the LED lamps **27** can be controlled to emit different colors of light into the associating light guides **21~26**. By means of the effect of the blocking filters **20**, each of the light guides **21~26** is illuminated with a respective color of light, and therefore the display zones **11~16** of the LCD panel **10** show different background colors A~F, showing a unique visual effect.

[0013] Although a particular embodiment of the invention has been described in detail for purposes of illustration, various modifications and enhancements may be made without departing from the spirit and scope of the invention.

What the invention claimed is:

1. A LCD monitor comprising a plurality of light guides arranged on a bottom side of a LCD panel thereof, multiple LED (light emitting diode) lamps respectively arranged at one side of each of said light guides and controllable to emit different colors of light to said light guides respectively for showing different background colors in different display zones on said LCD panel, and multiple blocking filters respectively attached to the periphery of said light guides to block the light of said LED lamps in the associating light guides respectively and to prohibit the light of each of said LED lamps from passing out of the associating light guide.

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专利名称(译)	液晶显示器有多种背景颜色		
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申请号	US11/705018	申请日	2007-02-12
[标]申请(专利权)人(译)	萧施文		
申请(专利权)人(译)	萧师文		
当前申请(专利权)人(译)	萧师文		
[标]发明人	HSIAO SHIH WEN		
发明人	HSIAO, SHIH-WEN		
IPC分类号	G02F1/1335		
CPC分类号	G02B6/0031 G02B6/0078 G02B6/0068 G02B6/0055		
外部链接	Espacenet USPTO		

摘要(译)

一种LCD监视器，其具有与各个LED灯相匹配的多个光导，并且周围用遮光滤光器阻挡，使得在其LCD面板的不同显示区域中显示不同的背景颜色。