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(54) **OLED DISPLAY PANEL**

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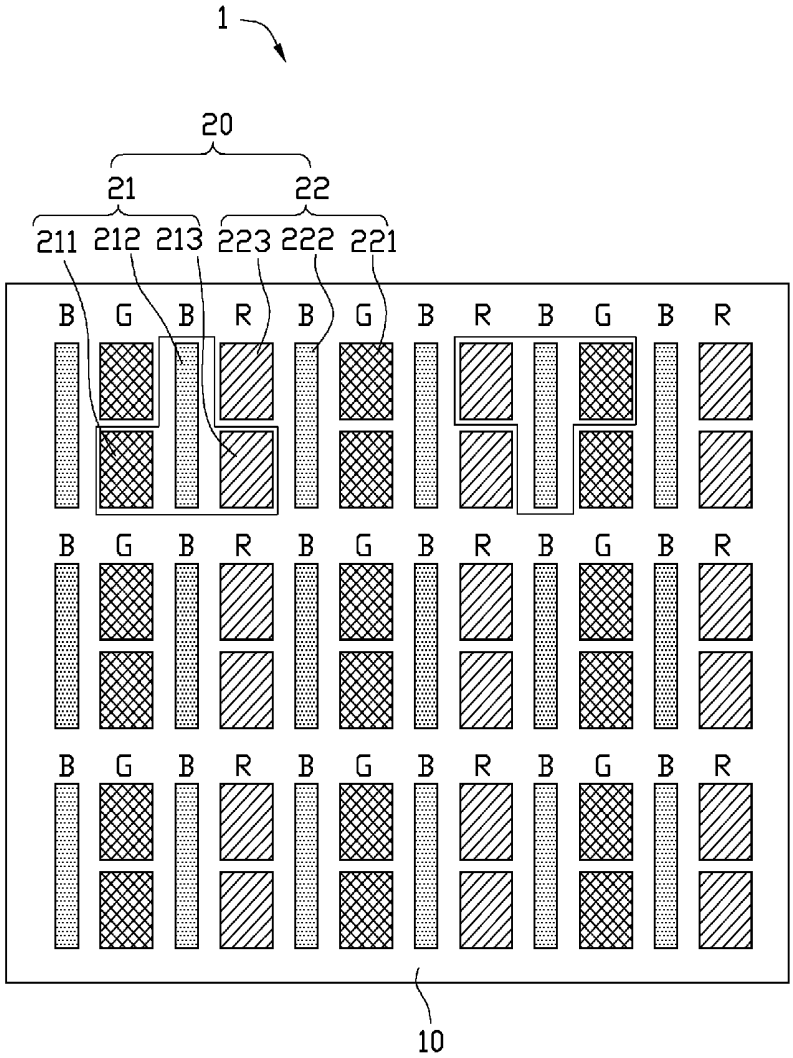
(57) **ABSTRACT**

An OLED display panel includes a plurality of spaced first pixels and a plurality of spaced second pixels spaced from each other. Each of the first pixel and the second pixel includes a first sub-pixel, a second sub-pixel and a third sub-pixel. The first sub-pixel, the second sub-pixel and the third sub-pixel are parallel to and spaced from each other. The first pixels and the second pixels are arranged in alternate pattern in one row. Of one first pixel and adjacent two second pixels of one row, the first sub-pixel of the first pixel is aligned with the first sub-pixel of the one second pixel, and the third sub-pixel of the first pixel is aligned with the third sub-pixel of the other one second pixel.



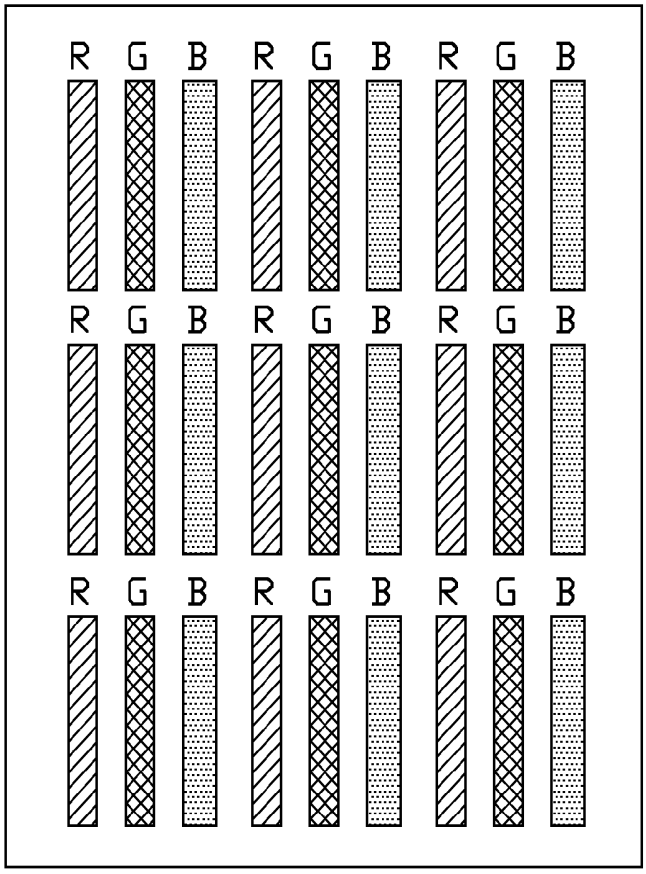


FIG. 1
(RELATED ART)

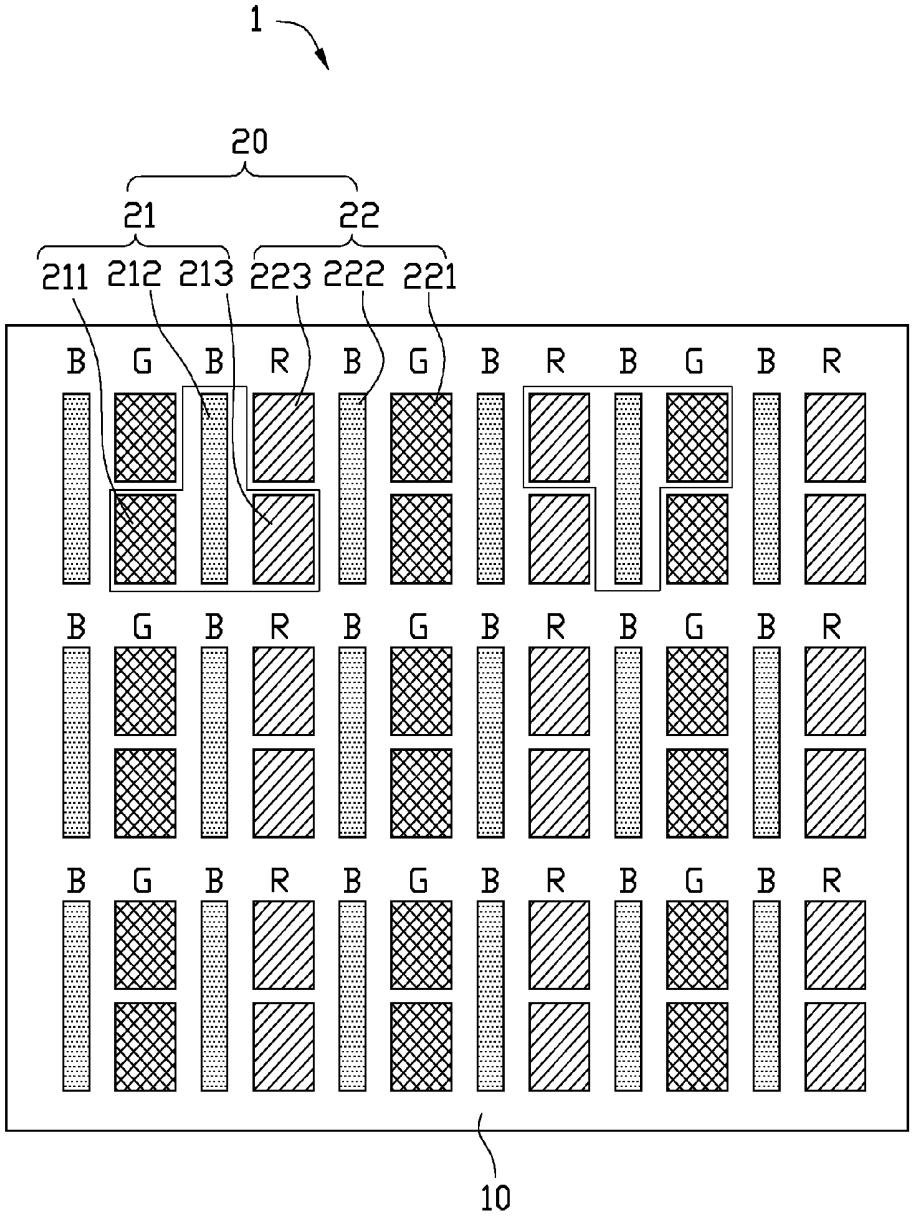

1
20
21
22
211
212
213
223
222
221
B G B R B G B R B G B R
B G B R B G B R B G B R
B G B R B G B R B G B R
10

FIG. 2

OLED DISPLAY PANEL

BACKGROUND

[0001] 1. Technical Field

[0002] The present disclosure relates to an OLED (organic light emitting diode) display panel.

[0003] 2. Description of Related Art

[0004] OLEDs (organic light emitting diodes) are in development for use in displays. An OLED display panel includes a plurality of pixels. Referring to FIG. **1**, each pixel includes three sub-pixels composed of red, green, and blue colors, to generate a color image. For higher pixel density, the arrangement of the sub-pixels must be more compact, thereby increasing the burden of manufacturing the OLED display panel.

[0005] Therefore, an OLED display panel capable of overcoming the above described shortcomings is desired.

BRIEF DESCRIPTION OF THE DRAWINGS

[0006] Many aspects of the present disclosure can be better understood with reference to the following drawings. The components in the drawings are not necessarily drawn to scale, the emphasis instead being placed upon clearly illustrating the principles of the present disclosure. Moreover, in the drawings, like reference numerals designate corresponding parts throughout the several views.

[0007] FIG. **1** shows a schematic view of a traditional OLED display panel.

[0008] FIG. **2** shows a schematic view of an OLED display panel in accordance with an embodiment of the present disclosure.

DETAILED DESCRIPTION

[0009] Referring to FIG. **2**, an embodiment of an OLED display panel **1** includes a base **10** and a pixel array **20** formed on the base **10**. The pixel array **20** includes a plurality of spaced first pixels **21** and a plurality of spaced second pixels **22**.

[0010] The first pixels **21** and the second pixels **22** are arranged in alternate pattern in one row, and each of the first pixels **21** and the second pixels **22** are respectively arranged in a line.

[0011] Each of the first pixels **21** includes a first sub-pixel **211**, a second sub-pixel **212**, and a third sub-pixel **213** substantially parallel to and spaced from each other. The second sub-pixel **212** is located between the first sub-pixel **211** and the third sub-pixel **213**. Bottom ends of the first sub-pixel **211** and the third sub-pixel **213** are substantially coplanar with a bottom end of the second sub-pixel **212**. A length of the first sub-pixel **211** is equal to that of the third sub-pixel **213**, and is less than that of the second sub-pixel **212**.

[0012] Each of the second pixels **22** includes a first sub-pixel **221**, a second sub-pixel **222**, and a third sub-pixel **223** substantially parallel to and spaced from each other. The second sub-pixel **222** is located between the first sub-pixel **221** and the third sub-pixel **223**. Top ends of the first sub-pixel **221** and the third sub-pixel **223** are substantially coplanar with a top end of the second sub-pixel **222**. A length of the first sub-pixel **221** is equal to that of the third sub-pixel **223**, and is less than that of the second sub-pixel **222**.

[0013] In one row, the first sub-pixel **211** of the first pixel **21** is aligned with the first sub-pixel **221** of one second pixel **22**, and the third sub-pixel **213** of the first pixel **21** is aligned with the third sub-pixel **223** of another second pixel **22**.

[0014] In this embodiment, a length of the first sub-pixel **211** of each first pixel **21** is less than a half of that of the second sub-pixel **212**, and a length of the first sub-pixel **221** of each second pixel **22** is less than a half of that of the second sub-pixel **222**. The first sub-pixels **211**, **221** of each first pixel **21** and each second pixel **22** are green sub-pixels, the second sub-pixels **212**, **222** are blue sub-pixels, and the third sub-pixels **213**, **223** are red sub-pixels. The first sub-pixels **211**, **221**, the second sub-pixels **212**, **222** and the third sub-pixels **213**, **223** are not limited to being a green sub-pixel, a blue sub-pixel, or a red sub-pixel, as long as they are a different color from each other.

[0015] For sub-pixels of the first pixel **21** aligned with the same color sub-pixels of the adjacent second pixel **22**, the first pixel **21** and the adjacent second pixel **22** are closer.

[0016] Furthermore, the two first sub-pixels and the two third sub-pixels with the same color can be manufactured in one chamber by evaporation process. Thus, the width of the first sub-pixel and the third sub-pixel can be further decreased, and the resolution of the OLED display panel **1** is accordingly increased.

[0017] Particular embodiments are shown and described by way of illustration only. The principles and the features of the present disclosure may be employed in various and numerous embodiments thereof without departing from the scope of the disclosure as claimed. The above-described embodiments illustrate the scope of the disclosure but do not restrict the scope of the disclosure.

What is claimed is:

1. An organic light emitting diode (OLED) display panel, comprising a plurality of spaced first pixels and a plurality of spaced second pixels, wherein the first pixels are spaced from the second pixels; each of the first pixels comprising a first sub-pixel, a second sub-pixel, and a third sub-pixel; the first sub-pixel, the second sub-pixel, and the third sub-pixel of each first pixel being substantially parallel to and spaced from each other; each of the second pixels comprising a first sub-pixel, a second sub-pixel and a third sub-pixel; the first sub-pixel, the second sub-pixel and the third sub-pixel of each second pixel being substantially parallel to and spaced from each other; in the first pixel and the second pixel, the second sub-pixel is located between the first sub-pixel and the third sub-pixel, and lengths of the first sub-pixel and the third sub-pixel are less than that of the second sub-pixel; in the first pixel, bottom ends of the first sub-pixel and the third sub-pixel are substantially coplanar with a bottom end of the second sub-pixel; in the second pixel, top ends of the first sub-pixel and the third sub-pixel are substantially coplanar with a top end of the second sub-pixel; the first pixels and the second pixels are arranged in alternate pattern in one row; in one row, the first sub-pixel of the first pixel is aligned with the first sub-pixel of one second pixel, and the third sub-pixel of the first pixel is aligned with the third sub-pixel of another second pixel.

2. The OLED display panel of claim **1**, wherein a length of the first sub-pixel of the first pixels and the second pixels is equal to that of the third sub-pixel of the first pixels and the second pixels.

3. The OLED display panel of claim **1**, wherein a length of the first sub-pixel of the first pixels and the second pixels is less than a half of that of the second sub-pixel of the first pixels and the second pixels.

4. The OLED display panel of claim **1**, wherein each of the first pixels and the second pixels are respectively arranged in a line.

5. The OLED display panel of claim **1**, wherein the first sub-pixel of the first pixels and the second pixels is a green sub-pixel, the second sub-pixel of the first pixels and the second pixels is a blue sub-pixel, and the third sub-pixel of the first pixels and the second pixels is a red sub-pixel.

* * * * *

专利名称(译)	OLED显示屏		
公开(公告)号	US20150035730A1	公开(公告)日	2015-02-05
申请号	US13/974057	申请日	2013-08-23
[标]申请(专利权)人(译)	业鑫科技顾问股份有限公司		
申请(专利权)人(译)	叶欣科技咨询有限公司.		
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IPC分类号	G09G3/32		
CPC分类号	G09G3/3208 G09G2300/0452 H01L27/3218		
优先权	102127959 2013-08-05 TW		
外部链接	Espacenet USPTO		

摘要(译)

OLED显示面板包括多个间隔开的第一像素和多个彼此间隔开的间隔开的第二像素。第一像素和第二像素中的每一个包括第一子像素，第二子像素和第三子像素。第一子像素，第二子像素和第三子像素彼此平行且间隔开。第一像素和第二像素以交替图案排列在一行中。在一行的一个第一像素和相邻的两个第二像素中，第一像素的第一子像素与一个第二像素的第一子像素对准，并且第一像素的第三子像素与第一像素的第一子像素对齐。另一个第二像素的第三子像素。