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(54) **Organic light emitting display**

(57) Disclosed is an OLED in which separation regions of spacers in odd and even rows are formed so that a fine metal mask (FMM) between light emission layers may move without being caught in the spacers. The OLED includes even and odd spacers protruding upwardly between light emission layers and are separat-

ed by separation regions. The separation regions of each row of spacers are aligned with spacers of adjacent rows and are not aligned with the separation regions of the adjacent rows.

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## EUROPEAN SEARCH REPORT

Application Number  
EP 08 15 7089

| 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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | EP 1 598 869 A2 (LG ELECTRONICS INC [KR])<br>23 November 2005 (2005-11-23)                                                                 | 1-7,9,<br>13-15                                   | INV.<br>H01L27/32                       |
| Y                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | * paragraphs [0017], [0023], [0074],<br>[0077], [0078], [0081]; figures 8,9 *                                                              | 10                                                | H01L51/00                               |
| Y                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | WO 03/038922 A1 (OSRAM OPTO SEMICONDUCTORS<br>GMBH [DE]; BIRNSTOCK JAN [DE]; BLAESSING<br>JOE) 8 May 2003 (2003-05-08)<br>* figures 2H,3 * | 10                                                |                                         |
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|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                            |                                                   | H01L                                    |
| The present search report has been drawn up for all claims                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                            |                                                   |                                         |
| Place of search<br>Munich                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                            | Date of completion of the search<br>29 April 2013 | Examiner<br>Pusch, Catharina            |
| <p>CATEGORY OF CITED DOCUMENTS</p> <p>X : particularly relevant if taken alone<br/>Y : particularly relevant if combined with another document of the same category<br/>A : technological background<br/>O : non-written disclosure<br/>P : intermediate document</p> <p>T : theory or principle underlying the invention<br/>E : earlier patent document, but published on, or after the filing date<br/>D : document cited in the application<br/>L : document cited for other reasons<br/>&amp; : member of the same patent family, corresponding document</p> |                                                                                                                                            |                                                   |                                         |

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**ANNEX TO THE EUROPEAN SEARCH REPORT  
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EP 08 15 7089

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.

29-04-2013

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| 专利名称(译)        | 有机发光显示器                                                                |         |            |
| 公开(公告)号        | <a href="#">EP2020685A3</a>                                            | 公开(公告)日 | 2013-06-05 |
| 申请号            | EP2008157089                                                           | 申请日     | 2008-05-28 |
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| [标]发明人         | SUH MISOOK                                                             |         |            |
| 发明人            | SUH, MISOOK                                                            |         |            |
| IPC分类号         | H01L27/32 H01L51/00                                                    |         |            |
| CPC分类号         | H01L27/3223 H01L27/3246 H01L27/3283 H01L51/0011 H01L51/0013 H01L51/525 |         |            |
| 审查员(译)         | PUSCH, 凯萨琳娜                                                            |         |            |
| 优先权            | 1020070078157 2007-08-03 KR                                            |         |            |
| 其他公开文献         | EP2020685A2                                                            |         |            |
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## 摘要(译)

公开了一种OLED，其中形成奇数行和偶数行中的间隔物的分离区域，使得发光层之间的精细金属掩模（FMM）可以移动而不会被间隔物捕获。OLED包括在发光层之间向上突出的偶数和奇数间隔物，并且由分离区域分开。每行间隔物的分离区域与相邻行的间隔物对齐，并且不与相邻行的分隔区域对齐。

| DOCUMENTS CONSIDERED TO BE RELEVANT                                                                    |                                                                                                                                                            | Relevant to claim      | Classification of the invention (IPC)     |
|--------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|-------------------------------------------|
| X                                                                                                      | EP 1 598 869 A2 (LG ELECTRONICS INC [KR])<br>23 November 2005 (2005-11-23)<br>paragraphs [0017], [0023], [0024],<br>[0077], [0078], [0081]; figures 8, 9 * | 1-7, 9,<br>13-15<br>10 | INV.<br>H01L27/32<br>H01L51/00            |
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| A                                                                                                      | US 6 520 819 B1 (SAKAGUCHI YOSHIKAZU [JP])<br>18 February 2003 (2003-02-18)<br>* figures 3F, 10, 11 *                                                      | 1                      |                                           |
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| The present search report has been drawn up for all claims<br>Munich 29 April 2013<br>Pusch, Catharina |                                                                                                                                                            |                        | TECHNICAL FIELD<br>SEARCHED (IPC)<br>H01L |