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01988262.0 / 1 332 487

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(54) **Display Tile Structure using Organic Light Emitting Materials**

(57) A tiled display structure is fabricated on a single substrate that also serves as a circuit board containing electronic components. Electrodes are formed on the substrate and the remainder of the display section is formed on the electrodes. The pixel elements used patterned display material, and occupy only a portion of the pixel structure. The electronic components are mounted on the substrate using exceptionally long leads to assist in the thermal management of tiles. Alternatively, each tile includes a fin structure on the circuit board surface

onto which electronic components are mounted and are not in contact with the substrate. Alternatively, each tile includes a flexible circuit board mounted on the substrate, a portion of which is bent away from the substrate. Electronic components are coupled to this portion of the flexible circuit boards such that the components are not in contact with the substrate to assist in thermal management.

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**PARTIAL EUROPEAN SEARCH REPORT**

Application Number

under Rule 62a and/or 63 of the European Patent Convention.
This report shall be considered, for the purposes of
subsequent proceedings, as the European search report

EP 11 15 5128

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	WO 99/41788 A1 (SARNOFF CORP [US]) 19 August 1999 (1999-08-19) * page 7, line 24 - line 26 * * page 8, line 1 - line 6 * * page 8, line 14 - line 19; figure 2 * -----	1-9, 11-15	INV. H01L27/32
X	JP 2000 100577 A (SONY CORP) 7 April 2000 (2000-04-07) * paragraphs [0038], [0045]; figure 12 * * figure 14 * -----	1,2,4-7, 9,13-15	
X	EP 0 884 782 A1 (MOTOROLA INC [US]) 16 December 1998 (1998-12-16) * figure 4 * -----	1,2,14, 15	
			TECHNICAL FIELDS SEARCHED (IPC)
			H01L G09G G02F H05B
INCOMPLETE SEARCH			
<p>The Search Division considers that the present application, or one or more of its claims, does/do not comply with the EPC so that only a partial search (R.62a, 63) has been carried out.</p> <p>Claims searched completely :</p> <p>Claims searched incompletely :</p> <p>Claims not searched :</p> <p>Reason for the limitation of the search: see sheet C</p>			
Place of search Munich		Date of completion of the search 20 September 2011	Examiner Pusch, Catharina
CATEGORY OF CITED DOCUMENTS		<p>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</p>	
<p>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</p>			

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EPO FORM 1503 03 82 (P04E07)



INCOMPLETE SEARCH SHEET C

Application Number

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Claim(s) completely searchable:

1, 2, 4-14

Claim(s) searched incompletely:

15

Claim(s) not searched:

3

Reason for the limitation of the search:

In response to a communication under Rule 63 EPC, the applicant indicated that an independent claim 1 should be understood to include the features of dependent claim 2 as filed. accordingly an independent method claim should combine the features of claims 13 and 14 as filed. Claim 1 has thus been searched as if it read:

a tiled display structure comprising a plurality of image tiles, each tile comprising:

a glass substrate having a front surface and a back surface;

a display section coupled to the back surface of the glass substrate, including a plurality of pixel structures, each pixel structure defining a pixel area and having an active region that occupies a portion of the pixel area, the plurality of pixel structures being arranged in a matrix having rows and columns and including a plurality of contacts for receiving electrical signals;

a passivation layer;

pixel driving circuitry coupled to a back surface of the glass substrate and arranged so as not to interfere with the active regions of the pixel structures, the pixel driving circuitry is configured to provide a plurality of electrical signals to respective ones of the electrical contacts of the pixel structures to selectively activate the plurality of pixel structures.

On further reconsideration claim 3 being dependent on claim 1 cannot be amended by features of claim 6 of the parent application, because the passivation layer is missing in claim 6 of the parent application and the pixel driving surface in claim 6 of the parent application is coupled to the bottom surface of the a which is not the glass substrate and not to the back surface of the glass substrate. Claim 3 has not been searched because there appears no way of drafting it in accordance with the requirements of Article 76(1) EPC.

According to p. 19, l. 1/2 and l. 8-10 the contacts couple to the row and column electrodes and not to a plurality of contacts as in present claim 15. Claim 15 thus has been searched as if the contacts were made to the row and column electrodes.

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

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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
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20-09-2011

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专利名称(译)	使用有机发光材料显示瓷砖结构		
公开(公告)号	EP2330627A3	公开(公告)日	2011-11-02
申请号	EP2011155128	申请日	2001-11-09
申请(专利权)人(译)	TRANSPACIFIC INFINITY, LLC		
当前申请(专利权)人(译)	TRANSPACIFIC INFINITY, LLC		
[标]发明人	MATTHIES DENNIS LEE		
发明人	MATTHIES, DENNIS, LEE		
IPC分类号	H01L27/32 H01L51/50 G02F1/1333 G02F1/1345 G09F9/00 G09F9/30 G09F9/40 G09G3/20 G09G3/30 G09G3/32 H01L25/16 H01L51/52 H04N9/12 H04N9/30		
CPC分类号	H01L27/3288 G02F1/13336 G02F1/1345 G02F2201/42 G09G3/20 G09G3/2085 G09G3/2088 G09G3/3208 G09G2300/026 G09G2300/0426 G09G2310/0278 G09G2320/043 G09G2320/048 G09G2360/141 H01L25/167 H01L27/3276 H01L27/3293 H01L51/5203 H01L51/5281 H01L2924/0002 H01L2924/09701 H01L2924/3011 H04N9/12 H04N9/30		
优先权	09/709904 2000-11-10 US		
其他公开文献	EP2330627A2		
外部链接	Espacenet		

摘要(译)

在单个基板上制造平铺显示结构，该基板也用作包含电子元件的电路板。在基板上形成电极，在电极上形成显示部分的其余部分。像素元件使用图案化的显示材料，并且仅占据像素结构的一部分。使用特别长的引线将电子元件安装在基板上，以有助于瓷砖的热管理。或者，每个瓦片包括在电路板表面上的鳍片结构，电子元件安装在该鳍片结构上并且不与基板接触。或者，每个瓦片包括安装在基板上的柔性电路板，其一部分远离基板弯曲。电子元件耦合到柔性电路板的这部分，使得元件不与衬底接触以辅助热管理。

 European Patent Office Patent Office of the European Union		PARTIAL EUROPEAN SEARCH REPORT under Rule 62a and/or 65 of the European Patent Convention. This report shall be considered, for the purposes of subsequent proceedings, as the European search report		Application Number EP 11 15 5128
DOCUMENTS CONSIDERED TO BE RELEVANT				
Category	Citation of documents with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)	
X	WO 99/41788 A1 (SABROFF CORP [US]) 19 August 1999 (1999-08-19) * * page 2, line 24 - line 26 * * page 8, line 1 - line 6 * * page 8, line 14 - line 19; figure 2 *	1-9, 11-15	INV. H01L27/32	
X	JP 2000 100577 A (SONY CORP) 7 April 2000 (2000-04-07) * * paragraph 0038, [0045]; figure 12 * * figure 14 * [0038], [0045]; figure 12 *	1, 2, 4-7, 9, 13-15		
X	EP 0 884 782 A1 (MOTOROLA INC [US]) 16 December 1998 (1998-12-16) * * figure 4 *	1, 2, 14, 15		
INCOMPLETE SEARCH For Search Division procedure: the present application, or one or more of its claims, does/ do not comply with the EPC or has/have a partial search (p. 102, 40) has been carried out. Claims searched completely : Claims searched incompletely : Claims not searched : Reason for the limitation of the search : see sheet C				
Place of search Munich		Date of completion of the search 20 September 2011		Examiner Pusch, Catharina
CATEGORY OF CITED DOCUMENTS 1 : priority document 2 : document cited in the application 3 : document cited in the application 4 : document cited in the application 5 : document cited in the application 6 : document cited in the application 7 : document cited in the application 8 : document cited in the application 9 : document cited in the application 10 : document cited in the application 11 : document cited in the application 12 : document cited in the application 13 : document cited in the application 14 : document cited in the application 15 : document cited in the application 16 : document cited in the application 17 : document cited in the application 18 : document cited in the application 19 : document cited in the application 20 : document cited in the application 21 : document cited in the application 22 : document cited in the application 23 : document cited in the application 24 : document cited in the application 25 : document cited in the application 26 : document cited in the application 27 : document cited in the application 28 : document cited in the application 29 : document cited in the application 30 : document cited in the application 31 : document cited in the application 32 : document cited in the application 33 : document cited in the application 34 : document cited in the application 35 : document cited in the application 36 : document cited in the application 37 : document cited in the application 38 : document cited in the application 39 : document cited in the application 40 : document cited in the application 41 : document cited in the application 42 : document cited in the application 43 : document cited in the application 44 : document cited in the application 45 : document cited in the application 46 : document cited in the application 47 : document cited in the application 48 : document cited in the application 49 : document cited in the application 50 : document cited in the application 51 : document cited in the application 52 : document cited in the application 53 : document cited in the application 54 : document cited in the application 55 : document cited in the application 56 : document cited in the application 57 : document cited in the application 58 : document cited in the application 59 : document cited in the application 60 : document cited in the application 61 : document cited in the application 62 : document cited in the application 63 : document cited in the application 64 : document cited in the application 65 : document cited in the application 66 : document cited in the application 67 : document cited in the application 68 : document cited in the application 69 : document cited in the application 70 : document cited in the application 71 : document cited in the application 72 : document cited in the application 73 : document cited in the application 74 : document cited in the application 75 : document cited in the application 76 : document cited in the application 77 : document cited in the application 78 : document cited in the application 79 : document cited in the application 80 : document cited in the application 81 : document cited in the application 82 : document cited in the application 83 : document cited in the application 84 : document cited in the application 85 : document cited in the application 86 : document cited in the application 87 : document cited in the application 88 : document cited in the application 89 : document cited in the application 90 : document cited in the application 91 : document cited in the application 92 : document cited in the application 93 : document cited in the application 94 : document cited in the application 95 : document cited in the application 96 : document cited in the application 97 : document cited in the application 98 : document cited in the application 99 : document cited in the application 100 : document cited in the application				