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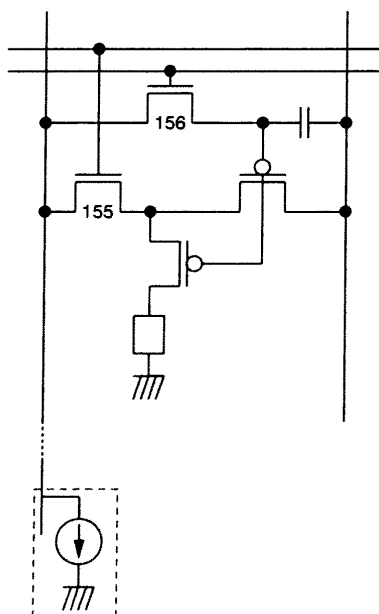
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(54) **Semiconductor device for a TFTdisplay matrix**

(57) A semiconductor device comprising: a first transistor; a second transistor; a third transistor; and an EL element, wherein one of a source and a drain of the first transistor is electrically connected to the EL element, wherein a gate of the first transistor is electrically connected to a gate of the second transistor, wherein one of

a source and a drain of the second transistor is electrically connected to a first line, wherein the other of the source and the drain of the first transistor is electrically connected to the other of the source and the drain of the second transistor, and wherein one of a source and a drain of the third transistor is electrically connected to the other of the source and the drain of the second transistor.

Fig. 1B





EUROPEAN SEARCH REPORT

Application Number
EP 10 17 9391

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 1 003 150 A (SEIKO EPSON CORPORATION) 24 May 2000 (2000-05-24) * paragraph [0002]; figure 10 * -----	1,3,5,8	INV. G09G3/30
X	WO 01/26088 A1 (KONINKL PHILIPS ELECTRONICS NV [NL]) 12 April 2001 (2001-04-12) * figure 3 * * page 9, line 1 - page 10, line 7 * -----	1,3,5-7	
A		4,11	
X	DAWSON R M A ET AL: "The impact of the transient response of organic light emitting diodes on the design of active matrix OLED displays", IEEE, USA, 6 December 1998 (1998-12-06), pages 875-878, XP010321598, DOI: DOI:10.1109/IEDM.1998.746494 ISBN: 978-0-7803-4774-8 * figure 7 * -----	1,3,6,8	
A		4,11	
			TECHNICAL FIELDS SEARCHED (IPC)
			G09G
The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 25 March 2011	Examiner Fulcheri, Alessandro
CATEGORY OF CITED DOCUMENTS 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 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			

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EPO FORM 1503 03.02 (P04C01)



Application Number

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CLAIMS INCURRING FEES

The present European patent application comprised at the time of filing claims for which payment was due.

☐ Only part of the claims have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due and for those claims for which claims fees have been paid, namely claim(s):

☐ No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due.

LACK OF UNITY OF INVENTION

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

see sheet B

☒ All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.

☐ As all searchable claims could be searched without effort justifying an additional fee, the Search Division did not invite payment of any additional fee.

☐ Only part of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid, namely claims:

☐ None of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims, namely claims:

☐ The present supplementary European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims (Rule 164 (1) EPC).



**LACK OF UNITY OF INVENTION
SHEET B**

Application Number

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The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

1. claims: 1-3, 5, 8-10

Semiconductor device.

The device comprises a fourth transistor, wherein one of a source and a drain of the fourth transistor is electrically connected to the gate of the second transistor.

2. claims: 4, 6

Semiconductor device.

The other of the source and the drain of the third transistor is electrically connected to the gate of the second transistor.

3. claim: 7

Semiconductor device.

The other of the source and the drain of the fourth transistor is electrically connected to the second line.

4. claim: 11

Method of driving for a semiconductor device.

A first current flows from the first line to a second line through at least the second transistor in a first period and a second current flows from the first line to the EL element through at least the second transistor and the first transistor in a second period.

**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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25-03-2011

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一种半导体器件，包括：第一晶体管；第二晶体管；第三晶体管；EL元件，其中第一晶体管的源极和漏极中的一个电连接到EL元件，其中第一晶体管的栅极电连接到第二晶体管的栅极，其中源极和源极之一第二晶体管的漏极电连接到第一线，其中第一晶体管的源极和漏极中的另一个电连接到第二晶体管的源极和漏极中的另一个，并且其中源极和漏极中的一个第三晶体管的漏极电连接到第二晶体管的源极和漏极中的另一个。