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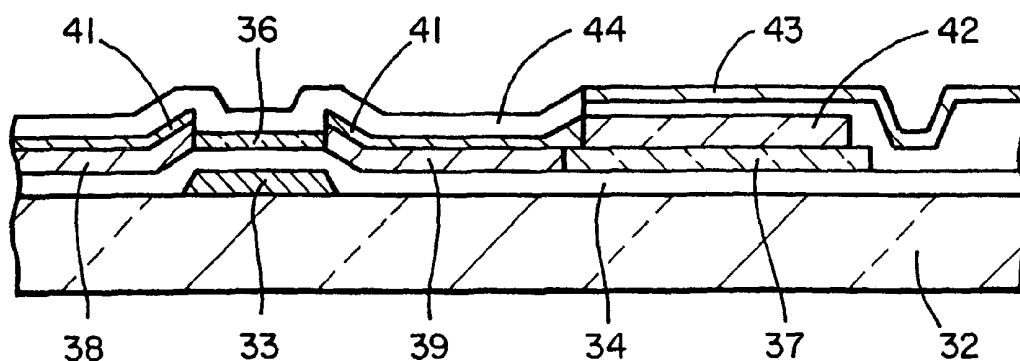
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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

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(54) Title: CDSE-BASED ACTIVE MATRIX FLAT PANEL DISPLAYS



(57) Abstract: An active matrix for flat panel displays comprises thin film transistors based on cadmium selenide (CdSe). The active matrix can be used in liquid crystal display devices and displays based on organic light emitting diodes. Each pixel drive circuit for a light-emitting diode requires two thin film transistors (21, 23) and a storage capacitor (22).

## INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 01/29308

A. CLASSIFICATION OF SUBJECT MATTER  
 IPC 7 G02F1/1368 G09G3/32

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 G02F G09G

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EP0-Internal

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 4 759 610 A (YANAGISAWA TOSHIO)	1,4
Y	26 July 1988 (1988-07-26) column 4, line 59 -column 5, line 11; figures 1,8 --- -/--	2,3

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

° Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

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"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

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## INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 01/29308

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	LEE M J ET AL: "High mobility cadmium selenide transistors" PROCEEDINGS OF THE INTERNATIONAL DISPLAY RESEARCH CONFERENCE. SAN DIEGO, OCT. 15 - 17, 1991, NEW YORK, IEEE, US, vol. CONF. 11, 15 October 1991 (1991-10-15), pages 211-214, XP010053768 ISBN: 0-7803-0213-3 in particular p. 212, left column, 2nd sentence "These result suggest the feasibility of building high speed driver circuits in cadmium selenide." the whole document	2,3
X	--- US 3 840 695 A (FISCHER A) 8 October 1974 (1974-10-08) in particular, column 5, lines 4-29 and lines 41-42 the whole document	1-4
X	--- CROSSLAND W A ET AL: "TRANSMISSIVE ANALOGUE SLM USING A CHIRAL SMECTIC LIQUID CRYSTAL SWITCHED BY CDSE TFT'S" PROCEEDINGS OF THE SPIE, SPIE, BELLINGHAM, VA, US, vol. 1455, 25 February 1991 (1991-02-25), pages 264-273, XP000997176 the whole document	1,4
Y	--- BRODY T P: "CDSE - THE IDEAL SEMICONDUCTOR FOR ACTIVE MATRIX DISPLAYS" PROCEEDINGS HIGH RESOLUTION DISPLAYS & PROJECTION SYSTEMS, 11.FEBR 92, SAN JOSE, BELLINGHAM, WA, US, vol. 1664, 11 February 1992 (1992-02-11), pages 2-13, XP000350972 the whole document	2,3
X	--- EP 0 878 789 A (TDK CORP ;SEMICONDUCTOR ENERGY LAB (JP)) 18 November 1998 (1998-11-18) column 3, line 55 -column 5, line 40; figure 2	1-4
Y	--- US 5 786 796 A (ARAI MICHIO ET AL) 28 July 1998 (1998-07-28) figure 4B	5-10
Y	-----	5-10

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/US 01/29308

## Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:  
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☒ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

### Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☒ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. Claims: 1-4

Flat panel display, in particular a liquid crystal display, comprising a matrix of thin film transistors based on cadmium selenide.

2. Claims: 5-10

A flat panel display comprising a matrix of rows and columns of light emitting diodes. Each diode is coupled to circuit comprising two thin film transistors and a storage capacitor. The material of the channel of each thin film transistor is cadmium selenide.

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US 01/29308

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
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