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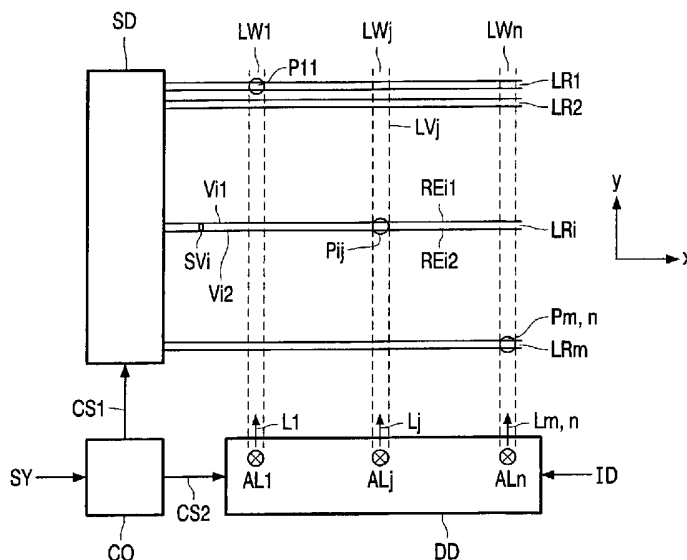
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[Continued on next page]

(54) Title: AN OPTICALLY ADDRESSABLE MATRIX DISPLAY



(S7) Abstract: A matrix display device comprises a matrix of optically addressable pixels (Pij) which comprise a light sensitive element (LSij) and a pixel light generating element (LGij). The light generating element (LGij) will produce a pixel light (LMij) with a brightness which depends on the state of the light sensitive element (LSij). The state of the light sensitive element (LSij) depends on the amount of light impinging on it. The actual brightness of the pixel light generating element (LGij) may further depend on a voltage across it. The pixels (Pij) are constructed such that a portion of the pixel light (PLMij) generated by the pixel light generating element (LGij) reaches the associated light sensitive element (LSij) of the pixel (Pij). The light sensitive element (LSij) is sensitive to the portion of the pixel light (PLMij) to obtain a feedback of the portion of the pixel light (PLMij) to the light sensitive element (LSij). This feedback may be used to obtain a memory behavior of the pixel (Pij) or to influence an intrinsic memory behavior of the pixel (Pij).



GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)

Declaration under Rule 4.17:

— as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY,

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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.

INTERNATIONAL SEARCH REPORT

International Application No
PCT/IB2004/050067

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 G09G3/02

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 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)

EPO-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 4 808 880 A (THIOULOUSE PASCAL) 28 February 1989 (1989-02-28) column 6, line 34 - line 36; figure 2 column 6, line 55 - line 57 column 6, line 64 - column 7, line 15; figure 3 column 7, line 26 - line 50; figure 5 -----	1-5,7,9
X,P	FR 2 833 741 A (THOMSON LICENSING SA) 20 June 2003 (2003-06-20) page 1, line 5 - line 10; figures 1,2 page 1, line 13 page 2, line 13 - line 14 page 3, line 13 - line 31 page 4, line 21 - line 28 ----- -/--	1-3,9

☒ 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

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"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

Date of the actual completion of the international search

22 June 2004

Date of mailing of the international search report

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INTERNATIONAL SEARCH REPORT

International Application No
PCT/IB2004/050067

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>US 6 215 462 B1 (SHIOYA MASAHARU ET AL) 10 April 2001 (2001-04-10) cited in the application figure 3</p> <p>-----</p>	6

INTERNATIONAL SEARCH REPORT

International application No.
PCT/IB2004/050067

Box II Observations where certain claims were found unsearchable (Continuation of item 2 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 III Observations where unity of invention is lacking (Continuation of item 3 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.:

1-7, 9-11

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: 1-7,9-11

"the control light generating device comprises a plurality of light generating elements and light wave guides for transporting the light generated by the plurality of light generating elements to lines of the pixels".

2. claim: 8

"a further light sensitive element for receiving the control light,
a capacitor coupled to the control electrode of the switching element, and
a further switching element having a control electrode coupled to the further light sensitive element and a main current path coupled to the control electrode of the first mentioned switching element."

INTERNATIONAL SEARCH REPORT

International Application No
PCT/IB2004/050067

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
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US 6215462	B1	10-04-2001	JP 11085059 A	30-03-1999