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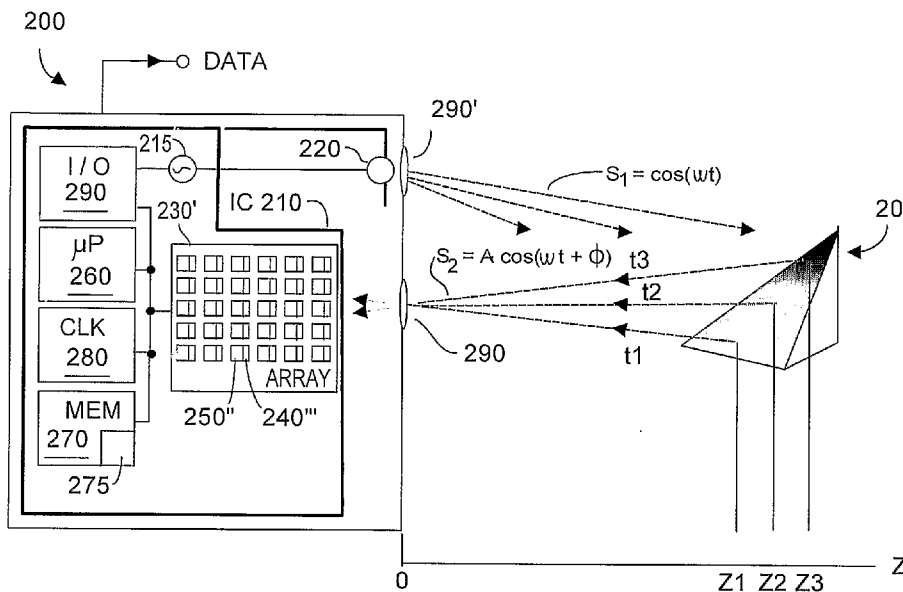
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(54) Title: METHODS AND DEVICES FOR IMPROVED CHARGE MANAGEMENT FOR THREE-DIMENSIONAL AND COLOR SENSING



(57) Abstract: TOF and color sensing detector structures have x-axis spaced-apart y-axis extending finger-shaped gate structures with adjacent source collection regions. X- dimension structures are smaller than y-dimension structure and govern performance, characterized by high x-axis electric fields and rapid charge movement, contrasted with lower y-axis electric fields and slower charge movement. Preferably a potential barrier is implanted between adjacent gates and a bias gate is formed intermediate a gate and associated source region. Resultant detector structures can be operated at the more extreme gate voltages that are desirable for high performance.

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— *with sequence listing part of description published separately in electronic form and available upon request from the International Bureau*

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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USPC - 356/5.1

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(8) - G01C 3/08; 1/00 (2007.01)

USPC - 356/5.1; 141.1

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 practicable, search terms used)

PatBase, MicroPatent

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 6,580,496 B2 (Bamji et al) 17 June 2003 (17.06.2003) entire document	1,4-6,9-12, 20-23
Y	US 2003/0223053 A1 (Liu et al) 04 December 2003 (04.12.2003) entire document	1,4-6,9-12,20-23

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