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Declarations under Rule 4.17:

- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))
- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))

[Continued on next page]

(54) Title: LAYOUT FOR ADAPTIVE GAIN PHOTODETECTORS

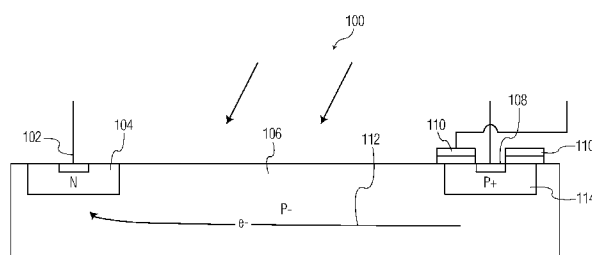


FIG. 1A

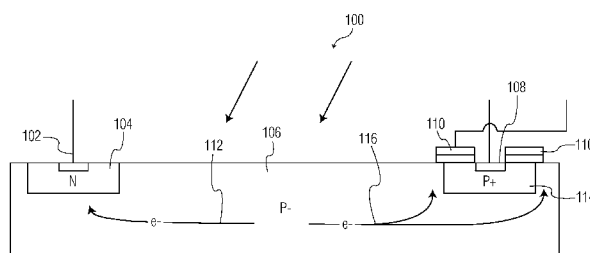


FIG. 1B

(57) Abstract: An imaging device having an integrated circuit die with an array that includes a plurality of pixels for collecting image data is described, having a single pixel. An electrical signal is produced in a photo-sensitive layer (106) in response to stimulus from photons. A portion of the produced electrical signal is received at a signal contact (102). A voltage is applied to a gate (110) of a controllable transistor located in the single pixel. The applied voltage forms a conductive channel in a non-conductive layer (114) that is distinct and different from the photo-sensitive layer, the non-conductive layer otherwise electrically isolating the drain (108) from the photo-sensitive layer with respect to the produced electrical signal. The photo-sensitive layer is used as a source of the controllable transistor. The channel is conductive with respect to the produced electrical signal.

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INTERNATIONAL SEARCH REPORT

International application No

PCT/IB2009/050291

A. CLASSIFICATION OF SUBJECT MATTER

INV. H01L27/146

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)

H01L

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, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	GB 2 103 876 A (SONY CORP [JP]) 23 February 1983 (1983-02-23) sentence 2, paragraph 82 - sentence 5, paragraph 7; figures 2,3	1-6,8-14
X	US 2007/278536 A1 (ADACHI SATORU [JP]) 6 December 2007 (2007-12-06) paragraphs [0041] - [0052], [0091] - [0094]; figures 1,3,12A-12C	1-15



Further documents are listed in the continuation of Box C.



See patent family annex.

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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.

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