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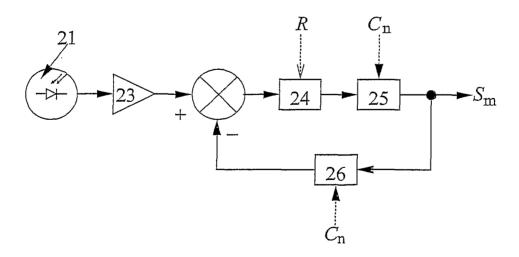
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(54) Title: X-RAY IMAGING MATRIX WITH LIGHT GUIDES AND INTELLIGENT PIXEL SENSORS, RADIATION OR HIGH ENERGY PARTICLE DETECTOR DEVICES THAT CONTAIN IT, ITS FABRICATION PROCESS AND ITS USE



(57) Abstract: The present invention refers to a radiation or high energy particles detector, which can be used in obtaining digital radiographic images. The detector is composed of two parts: a scintillator matrix (30) embedded in walls manufactured from a reflector material (10), and a matrix of image elements (pixels), where each element is constituted by a photodetector (21) and an analog to digital converter. The walls manufactured from the reflector material (10) form light guides that prevent the dispersion of the visible light produced by the scintillators (30) and the consequent interference between each pixel and its neighbors.





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#### INTERNATIONAL SEARCH REPORT

International application No
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A. CLASSIFICATION OF SUBJECT MATTER INV. G01T1/20 H04N5/32 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) GOIT HO4N 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. Υ ROCHA J G ET AL: "Cmos x-ray image sensor 1 - 14with pixel level a/d conversion" EUROPEAN SOLID-STATE CIRCUITS, 2003. ESSCIRC '03. CONFERENCE ON 16-18 SEPT. 2003, PISCATAWAY, NJ, USA, IEEE, 16 September 2003 (2003-09-16), pages 121-124, XP010677577 ISBN: 0-7803-7995-0 page 121 - page 122 Υ 1-6,8-14 WO 2005/069601 A (PHILIPS INTELLECTUAL PROPERTY [DE]; KONINKL PHILIPS ELECTRONICS NV [NL) 28 July 2005 (2005-07-28) page 1, line 21 - line 25 page 4, line 25 - page 6, line 19 X See patent family annex. Further documents are listed in the continuation of Box C. Special categories of cited documents: "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 "A" document defining the general state of the art which is not considered to be of particular relevance invention "E" earlier document but published on or after the international "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 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) "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 docu-"O" document referring to an oral disclosure, use, exhibition or ments, such combination being obvious to a person skilled document published prior to the international filing date but later than the priority date claimed "&" document member of the same patent family Date of the actual completion of the international search Date of mailing of the international search report 25 June 2007 04/07/2007 Authorized officer Name and mailing address of the ISA/ European Patent Office, P.B. 5818 Patentlaan 2 NL – 2280 HV Rijswijk Tel. (+31–70) 340–2040, Tx. 31 651 epo nl, Fax: (+31–70) 340–3016 Rabenstein, Winfried

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C(Continue	Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT					
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.				
<b>Y</b> :	US 5 368 882 A (TRAN NANG T [US] ET AL) 29 November 1994 (1994-11-29) column 3, line 11 - line 26 column 6, line 60 - column 8, line 65	1-14				
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### INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No PCT/IB2006/053268

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