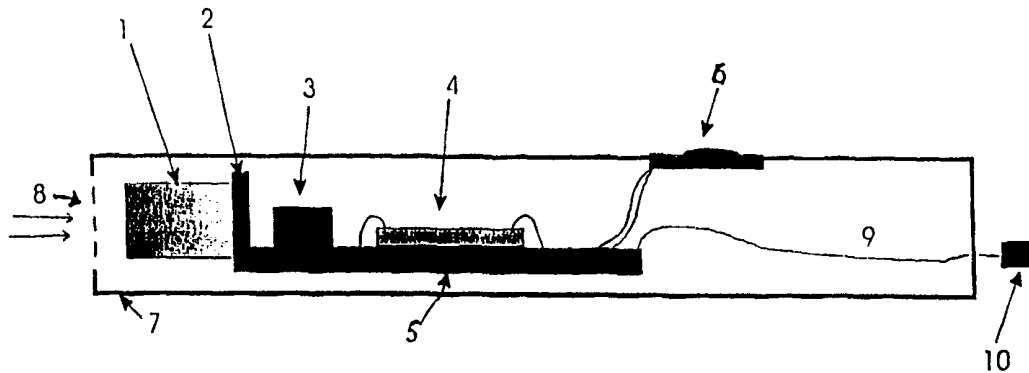




INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

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<p>(21) International Application Number: PCT/US99/08974 (22) International Filing Date: 23 April 1999 (23.04.99) (30) Priority Data: 09/066,545 24 April 1998 (24.04.98) US (71) Applicant: DIGIRAD CORPORATION [US/US]; 9350 Trade Street, San Diego, CA (US). (72) Inventors: PI, Bo; 9525 Genesee #20, San Diego, CA (US). COLLINS, Timothy, C.; 1052 Seahorse Court, Carlsbad, CA 92009 (US). CONWELL, Richard, L.; 13684 Boquita Drive, Del Mar, CA 94014 (US). GORMLEY, Jerome; 8007 Hollow Mesa Court, San Diego, CA 92126 (US). LINGREN, Clinton, L.; 6221 Hannon Court, San Diego, CA 92117 (US). (74) Agent: LAND, John; Fish & Richardson P.C., 4225 Executive Square #1400, La Jolla, CA 92037 (US).</p>	<p>(81) Designated States: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, 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, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).</p> <p>Published <i>With international search report. Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.</i></p> <p>(88) Date of publication of the international search report: 13 January 2000 (13.01.00)</p>	

(54) Title: INTEGRATED RADIATION DETECTOR PROBE



(57) Abstract

An integrated radiation detector system that integrates at least one silicon photodiode detector (2) (with or without a scintillation assembly (1)) with amplifiers (3), interface electronics (4), and radiation shielding into one compact radiation probe assembly. The probe assembly uses relatively low voltages, has relatively few electrical connections (9, 10), is relatively easy to manufacture, and is low-cost and thus disposable. The invention provides a radiation detection probe particularly useful for detecting radionuclides during lymphatic mapping.

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INTERNATIONAL SEARCH REPORT

International application No.

PCT/US99/08974

A. CLASSIFICATION OF SUBJECT MATTER

IPC(6) : G01T 1/24, 1/161; H01L 31/075

US CL : 250/370.14

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)

U.S. : 250/370.14, 370.11; 600/436

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)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 5,444,254 A (THOMSON) 22 August 1995 (22.08.1995), Fig. 7, column 9, lines 56-66.	13
Y	US 5,088,492 A (TAKAYAMA et al.) 18 February 1992 (18.02.1992), Fig. 1, column 19, lines 19-21.	1-21
Y	JP 1-191086 A (HITACHI MEDICAL CORP) 01 August 1989 (01.08.1989), Fig. 3.	2-7
Y	FR 2.155.773 A (RTC LA RADIOTECHNIQUE-COMPELEC) 25 May 1973 (25.05.1973), Fig. 2.	1-10, 16-21
Y	BILTON, C., et al., "Low-cost silicon photodiodes for x-ray detection." J. Phys. E: Sci. Instrum., August 1988, Vol. 21, No. 8, pages 809-811, especially 809 and 810.	11-12, 14-15

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