

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
26 June 2008 (26.06.2008)

PCT

(10) International Publication Number
WO 2008/075197 A3

- (51) International Patent Classification:
G01K 5/00 (2006.01) *G01K 15/00* (2006.01)
G01K 5/48 (2006.01)
- (21) International Application Number:
PCT/IB2007/004148
- (22) International Filing Date:
19 December 2007 (19.12.2007)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
60/875,719 19 December 2006 (19.12.2006) US
11/978,538 29 October 2007 (29.10.2007) US
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- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

- Published:
— with international search report
- (88) Date of publication of the international search report:
21 August 2008

(54) Title: FIBER OPTIC TEMPERATURE SENSOR

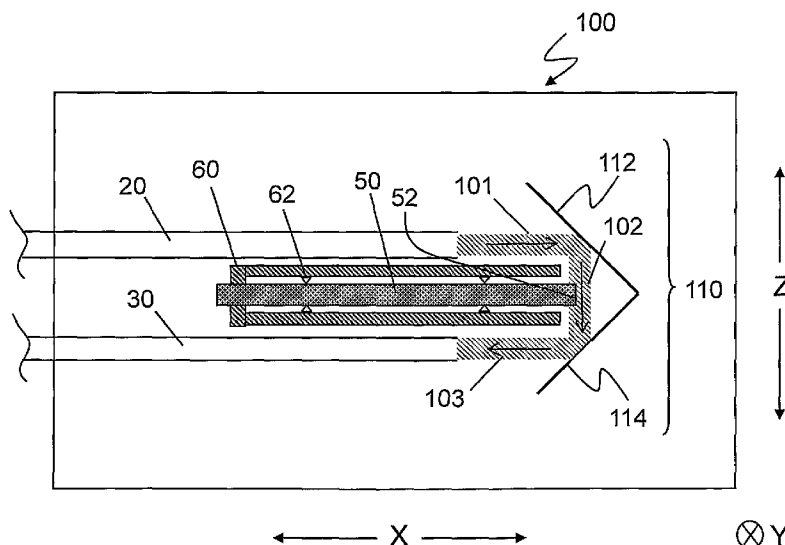


FIG. 2

(57) Abstract: A temperature sensor, capable of operating in electromagnetic and/or electric environments such as electrical generators, motors and transformers and/or in environments where vibratory conditions are frequent or continuous, contains at least one light emitting optic fiber and one light receiving optic fiber and an electrically non-conductive dilatant object which variably occults the emitted light as the object's temperature varies. The light receiving optic fiber transmits light intensity and light intensity changes to an electronic device that may include a photometer and light-to-temperature computing equipment.

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/IB2007/004148

A. CLASSIFICATION OF SUBJECT MATTER

IPC: *G01K 5/00* (2006.01), *G01K 5/48* (2006.01), *G01K 15/00* (2006.01)

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: G01K (2006.01); US classes: 374, 73 in combination with keywords

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic database(s) consulted during the international search (name of database(s) and, where practicable, search terms used)

Canadian Patent Database, USPTO West, Delphion, Google Scholar, IEEExplore. Keywords: temperature sensor, temperature transducer, optical fiber, mirror, occult, intensity, occlusion, shadow, hide, and variations thereof

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	JP 2006071549 A (Akira et al.) 16 March 2006 (16-03-2006) * Entire document *	1-25
A	EP 214040 B1 (Salour et al.) 16 February 1994 (16-02-1994) * Entire document *	1-25
A	JP 03156332 A (Yukimasa et al.) 4 July 1991 (04-07-1991) * Entire document *	1-25
A	US 4906107 (Luukkala) 6 March 1990 (06-03-1990) * Entire document *	1-25

 Further documents are listed in the continuation of Box C. See patent family annex.

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Date of the actual completion of the international search

7 May 2008 (07-05-2008)

Date of mailing of the international search report

23 May 2008 (23-05-2008)

Name and mailing address of the ISA/CA
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Facsimile No.: 001-819-953-2476

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INTERNATIONAL SEARCH REPORT
Information on patent family members

International application No.
PCT/IB2007/004148

Patent Document Cited in Search Report	Publication Date	Patent Family Member(s) Date	Publication
JP2006071549	16-03-2006	NONE	
EP214040	16-02-1994	AT101715T T AU594693B B2 AU6069586 A CA1297702 C DE3689640D D1 DE3689640T T2 EP0214040 A2 JP62098218 A US4703175 A	15-03-1994 15-03-1990 26-02-1987 24-03-1992 24-03-1994 19-05-1994 11-03-1987 07-05-1987 27-10-1987
JP03156332	04-07-1991	NONE	
US4906107	06-03-1990	DE3766781D D1 EP0259412 A1 FI860632 A JP63502531T T NO874189 A WO8705103 A1	31-01-1991 16-03-1988 18-11-1987 22-09-1988 06-10-1987 27-08-1987