Title: INTEGRATED BLACK BODY AND LENS CAP ASSEMBLY AND METHODS FOR CALIBRATION OF INFRARED CAMERAS USING SAME

Abstract: A black body assembly (10) is provided for use in the calibration of an infrared camera (11). The assembly (10) includes a housing (21), within which calibration components may be situated, and a lens guide (27) for accurately positioning the assembly (10) over lens (12) of the infrared camera (11). A heat emitter (22) is positioned within the housing (21) for emitting a necessary amount of heat for calibration purposes. A heating element (23) is also provided within the housing (21) for controlling the heating and cooling of the heat emitter. The assembly (10) includes a heat sink (24) to remove excessive heat generated from the heating element (23) during temperature cycling. An arm (29) hingedly connects the assembly (10) to the camera (11) to position the assembly (10) at the front of the lens 12. A method for calibrating an infrared camera is also provided.
INTERNATIONAL SEARCH REPORT

A. CLASSIFICATION OF SUBJECT MATTER
   IPC:  G01D 18/00 (2006.01);G12B 13/00 (2006.01);G01K 15/00 (2006.01);19/00 (2006.01)
   USPC:  250/252.1;374/2
   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. : 250/252.1, 504R, 393, 330-333, 338.1, 340, 493.1; 73/1.56; 356/43; 702/85; 374/2; 396/448

   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)
   EAST 2.1. Search terms: calibration, infrared, camera, emitter, heat

C. DOCUMENTS CONSIDERED TO BE RELEVANT

<table>
<thead>
<tr>
<th>Category</th>
<th>Citation of document, with indication, where appropriate, of the relevant passages</th>
<th>Relevant to claim No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>A, E</td>
<td>US 6,875,979 B2 (COPE) 5 April 2005 (05.04.2005), Figure 16, abstract.</td>
<td>1-19, 29-32</td>
</tr>
<tr>
<td>A</td>
<td>US 5,466,943 A (GREEN et al) 14 November 1995 (14.11.1995), Figure, abstract.</td>
<td>20-28, 33-39</td>
</tr>
<tr>
<td>A</td>
<td>US 5,602,389 A (KATO et al) 11 February 1997 (11.02.1997), Figure 1, column 3, lines 24-30.</td>
<td>20-28, 33-39</td>
</tr>
<tr>
<td>A</td>
<td>US 6,086,245 A (YAM) 11 July 2000 (11.07.2000), Figure 11, column 8, lines 9-23.</td>
<td>20-28, 33-39</td>
</tr>
</tbody>
</table>

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

* Special categories of cited documents:
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   "E" earlier application or patent published on or after the international filing date
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   "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
   "&" document member of the same patent family

Date of the actual completion of the international search: 22 August 2006 (22.08.2006)
Date of mailing of the international search report: 21 SEP 2006
Authorized officer: David Porta
Telephone No.: 571-272-1550

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