

Development of a methodology for bench evaluation of the range of staring thermal imaging devices

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In this paper we propose an engineering method for experimental assessment in bench conditions of the main tactical and technical parameter – the range – of modern staring thermal imaging devices (TID) in the detection and recognition of terrain objects, based on the resolution by a group of expert operators of an equivalent thermal test-objects with a fixed thermal contrast in their images, which does not require measurement of the temperature-frequency characteristic of TID. A procedure for evaluating the reliability of the TID bench tests results for a range is described, which ensures obtaining the lower bound of the confidence interval for this range with a given confidence probability. An example of the presented results practical use is also given.

Keywords: staring thermal imager, range, bench testing.

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