

Sensitivity uniformity improvement in InSb FPA

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Received 24.08.2023; accepted 8.09.2023

Two possible methods for obtaining InSb FPA with improved uniformity are considered: the use of MBE-grown structures and the use of ionic milling in the manufacture of FPA's from a bulk material. The results of studies of sensitivity in photodiode arrays of InSb under the incident of optical radiation in the IR, visible, and UV ranges are presented. It has been established that the method of the ionic milling backside of the FPA before anti-reflective coating can significantly suppress the recombination of photo carriers, as well as improve the adhesion of the applied anti-reflective coating. Decreases as a result of ion treatment spread of sensitivity (current or volt) over the array area in several times.

Keywords: Focal Plane Array (FPA), pixels, photodiode arrays, indium antimonide, recombination, uniformity.

DOI: 10.51368/2307-4469-2023-11-5-421-432

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