

Import replacement and creation of modern photodetector modules

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In recent years, rapid improvement of photonics products has been observed due to the use of multilayer heterostructures grown on the basis of perspective materials; the photosensitive element construction to achieve a minimum dark current, which in turn leads to a change of FPA generation. Several different types of photodetector modules, such as: based on InSb epitaxial structures for the range of 3–5 μm ; based on GaAs/AlGaAs QWIP-structures for the range of 7.8–9.0 μm ; based on InGaAs XBn-structures for the range of 0.9–1.7 μm , have been developed and investigated. The foreign analogues are shown, and the advantages given by the new capabilities offered by new detector technologies are considered.

Keywords: InSb, XBn-structure, QWIP-structure, photodetector module, detectivity D*.

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