

Investigation of spectral responses of QWIP photodetectors

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As a result of this research, it was found that photosensitive elements based on AlGaAs/GaAs heteroepitaxial structures have a spectral sensitivity range corresponding to the atmospheric transparency window of 8–10.5 μm . The amplitude of the deviation at the long-wave and short-wave boundaries is $\pm 0.1 \mu\text{m}$, which is two times lower than the deviation of the maximum. The discrepancy between the maximum and average values between the long-wave and short-wave spectral sensitivity is in the range of $\pm 0.2 \mu\text{m}$.

Keywords: infrared detectors, AlGaAs/GaAs, heterostructure, photodetector, spectral responsivity.

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