Title (en)

BROAD-BAND QUANTUM WELL INFRARED PHOTODETECTORS

Title (de)

BREITBANDIGE INFRAROT FOTODETEKTOREN MIT QUANTUMWELL

Title (fr)

PHOTODETECTEURS INFRAROUGE LARGE BANDE A PUITS QUANTIQUE

Publication

EP 1042816 A1 20001011 (EN)

Application

EP 98959585 A 19981123

Priority

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- US 6680197 P 19971126

Abstract (en)

[origin: WO9927583A1] A quantum well (200) can be designed to detect light of a particular wavelength by tailoring the potential depth and width of the well (202). The design produces two energy states (210, 208) in the well (202) separated by the desired photon energy. The GaAs/AlxGa1-xAs material system allows the quantum well shape to be varied over a range wide enough to enable light detection at wavelengths longer than approximately 6 mm. Hence, large bandgap materials such as GaAs/AlxGa1-xAs material has made fabrication of a large focal plane arrays tuned to detect light at wavelengths from 6 to 25 mm possible.

IPC 1-7

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CPC (source: EP)

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