Title (en)

OPTICAL TILTED CHARGE DEVICES AND METHODS

Title (de)

OPTISCHE GENEIGTE LADEVORRICHTUNGEN UND VERFAHREN

Title (fr)

DISPOSITIFS ET PROCÉDÉS DE CHARGE INCLINÉE OPTIQUE

Publication

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Application

EP 12850478 A 20121113

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Abstract (en)

[origin: WO2013074496A1] A method for producing optical signals with improved efficiency, including the following steps: providing a layered semiconductor structure that includes a substrate, a semiconductor collector region of a first conductivity type, a semiconductor base region of a second conductivity type disposed on the collector region, and a semiconductor emitter region of the first semiconductor type disposed as a mesa over a portion of a surface of the base region; providing, in the base region, at least one region exhibiting quantum size effects; providing collector, base, and emitter electrodes, respectively coupled with the collector, base and emitter regions; providing a tunnel barrier layer over at least the exposed portion of the surface of the base region; and applying signals with respect to the collector, base, and emitter electrodes to produce optical signals from the base region. Also disclosed is an optical tilted charge device with an InGaAsN quantum well.

IPC 8 full level

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