

Abstract

In this paper a new fully integrated detector architecture for pick-up units in optical storage systems is presented. Apart from a special diode constellation for data recovery it features a 5x5 diode matrix for determination of the average spatial light power distribution across the detector. The chip, fabricated in a standard 0.6 μ m CMOS process, operates at a 3.3V power supply and occupies 1.78x1.58mm². It includes six high frequency readout and one low frequency readout paths.

Keywords: Sensors, optical detectors, optical storage systems, CMOS