

Title (en)
OPTOELECTRONIC VOLTAGE-PHASE SWITCH USING PHOTODIODES

Title (de)
OPTOELEKTRONISCHER SPANNUNG PHASE SCHALTER MIT PHOTODIODEN

Title (fr)
COMMUTATEUR OPTOELECTRONIQUE DE TENSION-PHASE COMPORTANT DES PHOTODIODES

Publication
EP 0954881 A1 19991110 (EN)

Application
EP 97950833 A 19971126

Priority
US 9722229 W 19971126

Abstract (en)
[origin: WO9927589A1] A wavelength-portion controllable optoelectronic switch ("Opsistor") capable of rapid switch frequencies fabricated as a monolithic integrated circuit is disclosed. The Opsistor is comprised of two inverse parallel photodiodes in close proximity, preferably on a monolithic silicon substrate, such that the anode of one photodiode is electrically connected via a first conductor to the cathode of the second photodiode, and the cathode of the first photodiode is electrically connected via a second conductor to the anode of the second photodiode. The voltage-phase of the Opsistor is determined by the relative illumination of the Opsistor's two photodiodes and is rapidly switchable. Applications suitable for the Opsistor include high speed optocouplers, linear optical position sensors, edge and target detection sensors, image recognition sensors, the basic subunits of optically based state computers, and high resolution optical encoders.

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Citation (search report)
See references of WO 9927589A1

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