

ABSTRACT

An optical modulator is provided that suppresses the chirp due to the mask offset for example during the phase modulation and that provides a high waveform quality. An optical modulator is provided that includes: two RF electrodes for applying one pair of differential signal voltages; at least one fixed potential electrodes for applying a fixed potential; a first conductive semiconductor layer and a second conductive semiconductor layer abutted to the RF electrode or a fixed potential electrode; and a light modulation unit including two optical waveguides branched from one optical waveguide that are arranged along a pn junction unit functioning as a boundary between the first and second conductive semiconductor layers, wherein: the semiconductor layers and the electrode are provided so that the integration amounts of the phase changes caused by the offsets of the positions of the pn junction units in the two optical waveguides from a design value is equal between the two optical waveguides. (Figure 27)