HIGH FREQUENCY LIGHT MODULATORS

by

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ABSTRACT

Most applications of lasers require a means for high frequency modulation of the phase, frequency, amplitude or direction of the beam. Light modulators and beam deflectors based on the electro-optic effect in crystals have been operated at X-band (10^{10} cps) and there is no reason why they should not work at much higher frequencies. A number of devices have demonstrated the practical feasibility of this technique for some applications while other studies have pointed up the inherent limitations of this and other known modulation methods in important potential applications. The nature of the electro-optic effect, some of the important materials for its application and some of the devices that utilize the effect will be discussed from a tutorial point of view.