Light Modulation Using Attenuated Total Reflection (ATR)

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Abstrak

An optical modulation using attenuated total reflection offers several advantages in terms of speed, aperture size, and ease of operation compared to other techniques for amplitude modulation of a collimated light beam. This study developed a simple device consists of a prism separated from a mirror reflecting surface by a small-size gap. Varying the gap thickness changes the intensity of the light reflected off by the base of the prism. This thesis devoted to a study on the coupling of a plane wave, the principle of operation and some experiments. The result leads to the realization of the simple device with a high performance.