

# **THE EFFECT OF DRIVING FREQUENCY VARIATION ON THE OUTPUT BEAM DEFLECTION ANGLE OF ACOUSTO OPTIC MODULATOR (AOM)**

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Acousto-optic devices have played a central role in development of activities in the field of optical information processing, optical computing, optical communication and optical sensing. The basics principles involve in such devices are the interaction between photon and phonon (light and sound) which commandly called the Acousto-Optic effect. In this paper, an Acousto-Optic modulator using low cost SF6 glass with a lithium niobate transducer is studied. A system consisting a He-Ne laser, an AOM on a rotating stage with its driving device, was set up to investigate the output beam from the modulator. The investigation shows that there is a shift of a horizontal main beam spot position when the driving frequency of the modulator is changed. For a frequency range between 70-100MHz, a shift of beam spot between 4.0-5.5 mm is observed. This is accordance to the expected theoretical model of the modulator. The result can be utilized to investigate perfect position of detector.