

## Study on Intensity Modulated Non-Contact Optical Fiber Vibration Sensors of Different Configurations

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**Abstract :** Optical fibers are widely used in the measurement of several physical parameters like temperature, pressure, vibrations etc. Measurement of vibrations plays a vital role in machines. In this paper, three fiber optic non-contact vibration sensors were discussed, which are designed based on the principle of light intensity modulation. The Dual plastic optical fiber, Fiber optic fused 1x2 coupler and Fiber optic fused 2x2 coupler vibration sensors are compared based on range of frequency, resolution and sensitivity. It is to conclude that 2x2 coupler configuration shows better response than other two sensors.

**Keywords :** fiber optic, PMMA, vibration sensor, intensity-modulated

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