



Perimeter Intrusion Detection and Security Solutions

Our Customers Success is Our Success

Optical fiber perimeter intrusion detection systems enhance a security team's ability to detect and respond to intrusion events while reducing existing system and new construction costs. The system employs a fence-mounted and underground fiber optic sensing cable for vibration detection and a central sensing device analyzes both the magnitude and pattern of the vibration signatures, resulting in a system that is:

- **Responsive:** Low false positive rate due to noise generated by environmental factors.
- **Reliable:** High reliability for detection of intrusion events (low frequency of false negative).
- **Accurate:** +/-2.5% accuracy of intrusion event locations over continuous fence line lengths of up to 5 kilometers.



UNITED PHOTONICS LLC

Phone: 617.752.2073

Email: info@unitedPhotinics.net

Web: www.unitedPhotonics.net

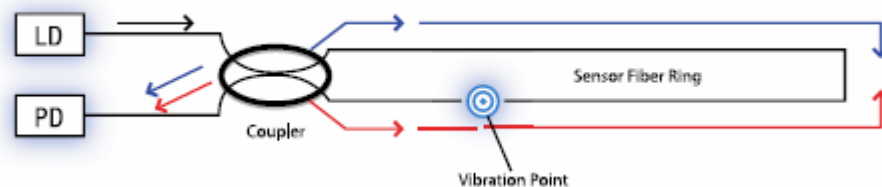


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How It Works:

Optical power from a laser diode is split by the optical coupler and is diffused through an optical fiber ring in two counter directional paths. When vibration is applied to the fiber, the strength of the interference light fluctuates due to the change of refractive index in the region of the cable vibration. The emitted light arrives at a vibration point with some difference in time of flight. After passing the vibration point, the two counter directional light packets are combined to cause interference. The light interference is detected by a photo diode (PD). Under static conditions (no vibration) the interference light strength is stable.



Our Goals:

- Cost Effectiveness
- Low False Positives/Negatives
- Rugged & Flexible System Architecture
- Disruption and Tamper Resistant
- Real Time Intrusion Detection
- Easy Maintenance
- Defeat Intruder Expectations

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