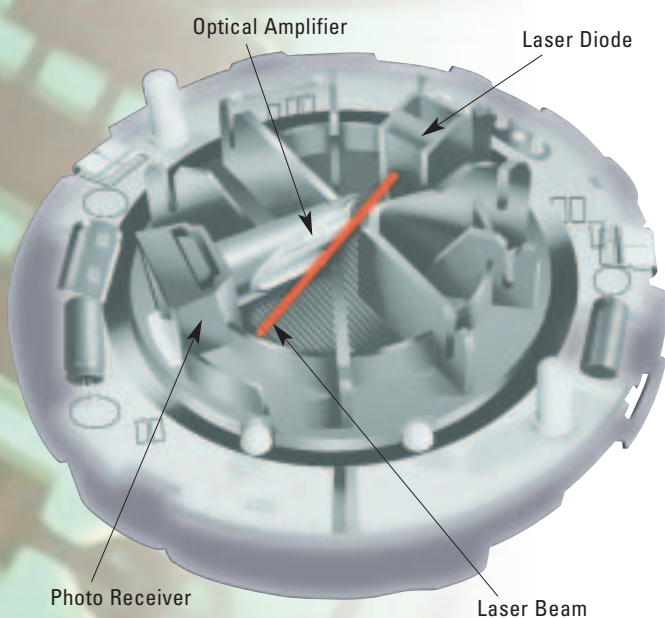


How Pinnacle Works

The principles of laser detection are similar to those of photoelectric technology. In a photoelectric smoke detector, a Light Emitting Diode (LED) emits light into a sensing chamber that is designed to completely restrict ambient light while allowing smoke to enter. Any particles of smoke entering the chamber will scatter the light and trigger the photodiode sensor.

Pinnacle works on the same light-scattering principle, but with 100× greater sensitivity. This ultra-sensitivity is due to the laser itself, which is literally amplified light (the word “laser” is an acronym for Light Amplification by Stimulated Emission of Radiation). Using an extremely bright, controlled laser diode, the laser beam is transmitted through the chamber to a light trap that eliminates any reflection. If a particle of smoke (or dust) enters the chamber, light from the laser is scattered and the detector, using patented algorithms, verifies the nature of the scattered light to determine whether the source is dust or smoke. If a determination of smoke is made, the alarm is signaled. Smoke particles, especially those by-products of an early fire, are extremely small, hence the need for the high sensitivity of the laser.



Pinnacle Specifications

Voltage Range:

15 – 32 volts DC peak

Standby Current (max. avg.):

230 μ A @ 24 VDC (without communication)

330 μ A @ 24 VDC (one communication every 5 sec.)

LED Current (max.):

6.5 mA @ 24 VDC (on)

Height:

1.66" (4.2 cm)

Diameter:

4.0" (10.2 cm)

Shipping Weight:

5.6 oz. (159 g)

Operating Temperature Range:

32° to 100°F (0° to 38°C)

Velocity Range:

0 – 4000 fpm (0 to 20.3 m/s)

Relative Humidity:

10% – 93% noncondensing

Self Diagnostics:

Initiated by control panel

Activated by test magnet

Smoke Sensitivity (9 levels):

0.02, 0.03, 0.05, 0.10, 0.20, 0.50, 1.00, 1.50, 2.00%/ft. obscuration
(0.06, 0.10, 0.16, 0.33, 0.66, 1.65, 3.24, 4.85, 6.41%/m obscuration)

Drift Compensation:

High sensitivity maintenance alert signal

Low sensitivity maintenance alert signal

Maintenance urgent signal

At System Sensor, innovation is more than an ideal – innovation is our way of life. Every day we work to design new products that utilize the most innovative technologies in the most inventive ways, products that are more convenient to install and more efficient to operate, products that provide our customers with the highest level of reliability. In other words, we make it our business to develop advanced ideas that deliver advanced solutions.

System Sensor is a global manufacturer of fire detection and notification devices, specializing in smoke detection and notification technology. System Sensor places a premium on research and development, resulting in products that are reliable, sophisticated and designed for real-world applications. With sales, service and manufacturing facilities throughout the Americas, Europe and Asia, System Sensor's high quality, innovative products are the most comprehensive in the industry.



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