



Overview

The EC-50R/-100R comprises a transmitter and receiver in a single enclosure and is usually installed between 19 inches and 24 inches below the ceiling. The transmitter emits an invisible infrared light beam that is reflected via a prism mounted directly opposite and with a clear line of sight. The reflected infrared light is detected by the receiver and analyzed. Smoke in the beam path will reduce the received infrared light proportionally to the density of the smoke. The detector analyzes this attenuation or obscuration of light and acts accordingly. Detectors are typically mounted within ± 30 feet (9.14 m) of a potential fire source. Consult your Authority Having Jurisdiction for spacing requirements specific to your locality.

Technical Specifications

Beam Detector	
Power Supply	10.2 Vdc to 30 Vdc (continuous power)
Current	Standby: Less than 4 mA Alarm/Trouble: Less than 14 mA
Contacts	Alarm: Normally Open, rated 2A, 30 Vdc, resistive Trouble: Normally Closed, rated 2A, 30 Vdc, resistive
Signal Delay	Alarm and trouble: 10 seconds
Reset Time	>5 seconds (power down)
Dimensions (HxWxD)	8.25 in x 5.1 in x 4.7 in (21 cm x 13 cm x 12 cm)
Weight	1.5 lb (0.68 kg)
Operating Environment	Temperature: 32°F to 100°F (0°C to 37°C) Humidity: 93% RH, Non-condensing
Beam Coverage	Width: 30 ft (9.14 m) either side of beam Length (EC-50R): 15 ft to 160 ft (4.57m to 48.77m) Length (EC-100R): 160 ft to 330 ft (48.77m to 100m)
Alarm Thresholds	2.50dB (25%), 3.74dB (35%), 6.02dB (50%) obscuration

Reflective Beam Smoke Detector

EC-50R/-100R



Standard Features

- Coverage:
 - 50R range 15 -160 ft (4.6 - 48.8m);
 - 100R range 160- 330 ft (48.8 - 100m)
- Microprocessor controlled
- Automatic drift compensation
- Selectable alarm thresholds
- 24 Vdc operating voltage
- Optional Ground Level Test Station

Application

Reflective beam smoke detectors are ideal for large open areas such as warehouses, hotel atriums, industrial plants and school gymnasiums.

Installation and Mounting

The recommended installation height is approximately 19 to 24 inches (483 to 610 mm) below the ceiling. However, in all installations the National Fire Standards for that country/state must be consulted.

Because of the reflecting properties of the beam, all objects must be kept a minimum of 19 inches (483 mm) away from the centre of the beam path down the entire beam length. If highly reflective surfaces are close to the beam, then greater clearances should be applied.

Ordering Information

Cat. No.	Description	Ship Wt lb (kg)
EC-50R	Reflective Beam Smoke Detector c/w test filter and one reflector	2.0 (0.90)
EC-100R	Reflective Beam Smoke Detector c/w test filter and four reflectors	2.0 (0.90)

Accessories

Cat. No.	Description
EC-LLT	Remote test station
23901-01	Replacement prism reflector



EC-50R