# Fireray® 50/100RU

## Reflective Optical Beam Smoke Detector

The system comprises of a single unit incorporating an infra-red transmitter and receiver. The signal generated in the transmitter element and reflected by the prism back to the receiver element is analyzed for the presence of smoke. The internal microprocessor determines an alarm condition when a predetermined level is reached.

The system is designed to be mounted so the beam will project between 19" (0.5m) and 24" (0.6m) below and parallel to the ceiling. Lateral detection may be up to 30ft. (9.144m) on either side of the beam, providing a maximum total coverage area of up to 19,800 square feet (60ft. x 330ft. or 18.29m x 100m).

### Engineering Specification

The projected beam type smoke detector shall be a 4-wire 12/24 VDC device to be used with a Nationally Recognized Testing Laboratory's Listed separately supplied 4-wire control panel. Unit shall be listed to U.L. 268 and shall consist of an integrated transmitter and receiver. The detector shall operate between a range of 16.5 ft. to 330 ft. (5m to 100m). The temperature range of the beam shall be -4°F to 131°F (-20°C to +55°C). The beam detector shall feature automatic gain control which will compensate for gradual signal deterioration from dirt accumulation on the lenses. The unit shall include a wall mounting bracket. Testing shall be carried out by using a calibrated obscuration test filter. The Reflective beam type smoke detector shall be a Fire Fighting Enterprises 50RU (160 ft./50m) or 100RU (330 ft./100m).

### Beam Detector Spacing

On smooth ceilings, up to 60 ft. (18.288m) between reflective beams and not more than one half that spacing between a reflective beam and a sidewall. Other spacing may be used depending on ceiling height, airflow characteristics and response requirements. See NFPA 72 for further information.

### Listings

- UL - S3417
- ULC - S3417
- MEA - 70-02-E
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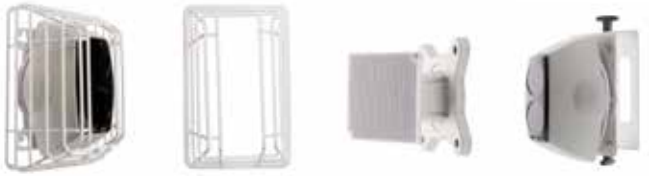
- CSFM - 7260-1508-102
- Maryland - 2243

### Features

- 2 Models for ranges of:
  - 16.5 ft. to 160 ft. (5m to 50m)
  - 160 ft. to 330 ft. (50m to 100m)
- Easy set up and alignment
- Single compact housing
- Calibrated obscuration test filter included
- 3 selectable alarm thresholds: 25%, 35% or 50%
- Microprocessor controlled
- Alarm latching or auto reset
- Automatic gain control
- 12 VDC or 24 VDC operation
- Separate alarm and trouble contacts
- Remote Test Station available
- 3 Year Warranty.



Fireray 50RU/100RU Accessories

# Fireray® 50/100RU

### Construction Specification

| | |
|---|---|
| Housing: | Flame Retardant ABS |
| IP Rating: | IP50 |
| Finish: | Grey/Black |
| Weight: | 1.5 lbs (0.68 kg) |
| Dimensions: | 8.25" H x 4.5" D x 4.75" W<br>(210mm H x 114.3mm D x 120mm W) |

### Electrical Specification

| | |
|---|---|
| Primary Input Power: | 10.2 to 30 VDC |
| Standby Current: | 4mA @ 24 VDC |
| Alarm Current: - | 15mA @ 24 VDC |
| Relay Contacts: | 1A at 30 VDC Resistive |
| Reset Time: | 5 Seconds maximum |
| Start Up Time: | 10 Seconds |
| Optical Wavelength: | 880nm |
| Sensitivity: | 25%, 35%, 50% |
| Temperature Rating: | -4°F to 131°F (-20°C to 55°C)<br>For UL Listed Installations:<br>32°F to 100°F (0°C to 38°C) |
| Relative Humidity: | 10% to 93% RH non-condensing |
| Range: | 50RU 16.5-160 ft. (5m-50m)<br>100RU 160-330 ft. (50m-100m) |

### Operational Specification

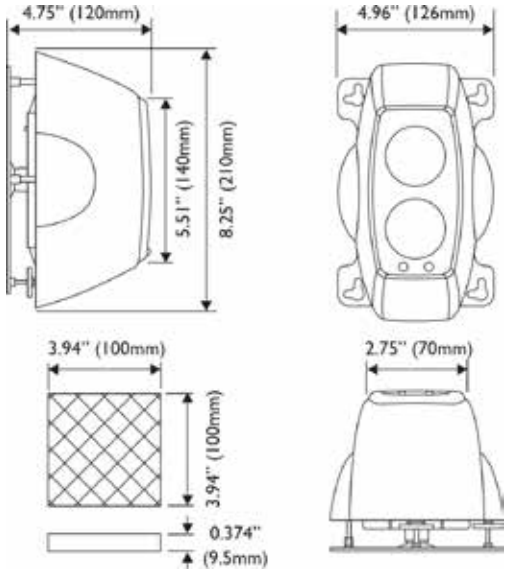
- Latching / Non latching alarm
- Fault condition (Trouble)
- 90% or more obscuration (Trouble)
- Automatic gain control
- Improper set up alignment (Trouble)
- Microprocessor controlled
- 3 Sensitivity selections
- Indicators - Alarm Red LED / Trouble Amber LED

### Applications

- Open areas (Warehouses, Hotel Atriums, Industrial Plants and School Gymnasiums).
- Public areas where cosmetics are of prime importance and detector heads need to be small and unobtrusive (Shopping Malls, Libraries, Theaters and Churches).

### Benefits

Reduces installation costs where 6 or more spot detectors are required in a single area. Reduces service time by taking advantage of optional remote test station located at ground level for system test without disruption of the site.




### Ordering Information

| | |
|---|---|
| 50RU | Reflective beam smoke detector 16.5ft-160ft. (50m) (0206-02) |
| 100RU | Reflective beam smoke detector 160ft-330ft. (100m) (0206-03) |
| LLC | Remote Test Station (0400) |
| 0608 | Surface Mount Back Box for 50RU/100RU Beam Detectors |
| 0893 | Surface Mount Wall Bracket for 50RU/100RU Beam Detectors |
| 0209 | Obscuration Test Filter |
| 23901 | Replacement Prism |
| 5000-005 | Alignment Bracket Base for 5000-007 and 5000-008 |
| 5000-006 | Prism Wall Bracket |
| 5000-007 | 4 Prism Alignment Bracket |
| 5000-008 | 1 Prism Alignment Bracket |
| 5000-014 | Ceiling Pendant Mount Bracket |
| 1000-020 | Wire Protective Cage |

Specifications and wiring information are provided for information only and are believed to be accurate. FFE Ltd assumes no responsibility for their use. Data and design are subject to change without notice. Installation and wiring instructions are shipped with the products and should always be used for actual installation. For more information, contact your Sales Representative.

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