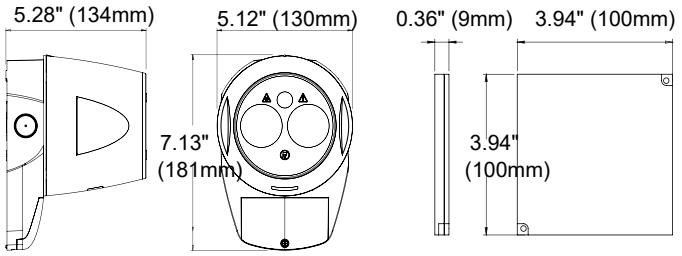
# The Fireray One

The Fireray One | Reflector




## Ordering information

| | Description |
|---|---|
| | The Fireray One – 164ft (50m) detection range |
| | Reflective Long Range Kit – 394ft (120m) detection range |

## Accessories

| | |
|---|---|
| | Commissioning and Maintenance Kit |
| | Reflective Detector adjustment bracket |
| | The Fireray One Protective cage |
| | Single Reflector Adjustment Bracket |
| | 4 Reflector Adjustment Bracket |
| | Reflector wall bracket - white |
| | Reflector wall bracket - black |
| | The Fireray One Anti-condensation heater |
| | Reflector Anti-condensation heater |
| | The Fireray One Back Box |

Prism Mount Plate

Back Box

Protective Cage

Long Range Kit

Universal Wall Bracket

## STANDARD FEATURES

- Integrated user interface with alignment mode switch, alignment directional buttons and configuration switches for alarm response threshold
- 2 Green LEDs and 1 Yellow LED for alignment status indication
- System status indication: Green LED for normal operation, red LED for alarm condition and yellow LED for fault condition (obscuration or contamination)
- Flat front face with enclosed optics. Cleaning the optics does not affect alignment

## APPLICATIONS

The Fireray One offers for small warehouses a cost effective protection and simple installation. It's a standalone beam detector with all the benefits of Fireray Reflective beam detection with a single point of wiring and commissioning.

For new buildings, while other beam detectors to misalign and result in nuisance alarms due to settling of the building, the Fireray One automatically compensates for natural building movement to continuously maintain alignment* with Building Movement Tracking™

## PRODUCT DESCRIPTION

With no specialist tools or knowledge needed for installation and operation, the Fireray One is a standalone beam detector that prioritizes ease of installation. Using the Fireray One, it couldn't be easier to bring the benefits of beam detection to your application:

– One Minute Auto-Alignment™ – just steer the laser onto the Reflector,then at the flick of a switch, it aligns itself. 8 times faster than previous detectors

– One person installation – everything can be done by one person

– One standalone product – no specialist tools required; minimal prior knowledge and training needed

## PRODUCT LISTINGS

SIGNALING UL LISTED

FM APPROVED

0832-CPR-F2237 /UL 7th Edition/ ULC /CSFM Patents:
Light Cancellation Technology™ Patent No. GB2513366
Dynamic Beam Phasing Patent pending
Auto-Alignment™ Patent pending

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HOCHIKI

| | |
|---|---|
| **Detection performance** | |
| **Detection range** | 0 to 164ft (0 to 50m)<br>0 to 394ft (0 to 120m) with Reflective Long Range Kit |
| **Alignment method** | Laser assisted, Auto-Alignment™. Manual alignment – optional setting |
| **Auto-Alignment™ protocol** | Background check, Box search, Adjust and Center |
| **Building Movement Tracking™** | Compensates for natural shifts in alignment from building movement* |
| **Contamination Compensation** | Compensates for gradual build-up of contamination on the optical surfaces |
| **Light Cancellation Technology™** | Compensates for high levels of sunlight and artificial lighting |
| **Optical wavelength – smoke detection** | 850nm near infrared (invisible) |
| **Integrated laser – laser alignment** | 650nm visible. Class IIIa <5mW |
| **Dynamic Beam Phasing** | Allows beam detectors to be mounted facing each other with the reflectors in the middle.<br>Eliminates false alarms caused by crosstalk between beams |
| **Signal output** | Individual Alarm and Fault relays (VFCO) 2A @ 30 VDC |
| **Programmable user settings** | |
| **Alarm response threshold levels** | 25% (1.25dB) – Fastest response to smoke<br>35% (1.87dB) – Default value<br>55% (3.46dB) – High immunity to false alarms, slow response to smoke 85% (8.23dB) – Highest immunity to false alarms, slowest response to smoke<br>Configured via the integrated user interface |
| **Delay to Alarm** | 10 seconds, for momentary partial obstruction of the beam path |
| **Delay to Fault** | 10 seconds, for momentary obstruction of the beam path |
| **Design parameters** | |
| **Separation distance between Detector and Reflector** | 16 to 164ft (5 to 50m)<br>164 to 394ft (50 to 120m) with Reflective Long Range Kit |
| **Beam path clearance** | 3.3ft (1m) in diameter from center line between Detector and Reflector |
| **Lateral spacing between detectors** | 60ft (18.3m) maximum as per NFPA 72 |
| **Detector location** | Within the ceiling jet flow (top 10% of the floor to ceiling height) unless otherwise stipulated |
| **Detector dimensions** | Width 5.12" x Height 7.13" x Depth 5.28" (W 130mm x H 181mm x D 134mm) (see diagram) |
| **Reflector dimensions** | Up to 164.0ft (50m) separation distance – 3.94" x 3.94" x 0.36" (100mm x 100mm x 9mm)<br>Up to 393.6ft (120m) separation distance - Four reflectors 7.88" x 7.88" x 0.36" (200mm x 200mm x 9mm) in square pattern |
| **Product weight** | Detector – 1.55lbs (0.7 kg); Reflector – 0.22lbs (0.1 kg) |
| **Multi-detector arrangement** | Dynamic Beam Phasing allows for Detectors to face each other with the reflectors in the middle |
| **Housing color** | White RAL9016, UV stable |
| **Electrical specifications** | |
| **Operating voltage** | 14 to 36 VDC |
| **Operating current (constant) all operational modes** | All operational modes – 5mA; Fast alignment mode – 33mA |
| **Field wiring** | |
| **Cable gauge and type** | 2 core, dedicated, 24 to 14 AWG (0.5 to 1.6mm)<br>System compatible with fi reproof and non-fireproof cable meeting local installation standards |
| **Cable entry** | 3 knock-out locations capable of accepting M20, ½" or ¾" glands<br>4 drill-out locations capable of accepting glands up to 0.82" (21mm) diameter |
| **Test and maintenance** | |
| **Alarm test** | Optical alarm test using Commissioning and Maintenance Kit accessory |
| **Environmental specifications (All figures are quoted for 77°F [25°C])** | |
| **Operating temperature** | -4 to 131°F (-20 to +55°C) |
| **Storage temperature** | -40 to 185°F (-40 to +85°C) |
| **Relative humidity (non-condensing or icing)** | 0 to 93% |
| **IP rating** | IP55 |
| **Housing flammability rating** | UL94 V0 polycarbonate |
| **Optical specifications** | |
| **Fault level / Rapid obscuration (Δ ≤ 2 seconds)** | ≥85% |
| **Maximum angular alignment of Reflective Detector** | ±4.5° (±70° with adjustment bracket accessory) |
| **Maximum angular misalignment of Reflective Detector** | ±0.5° |
| **Maximum angular misalignment of Reflector** | ±5° |

**When mounted according to manufactures guidelines.*