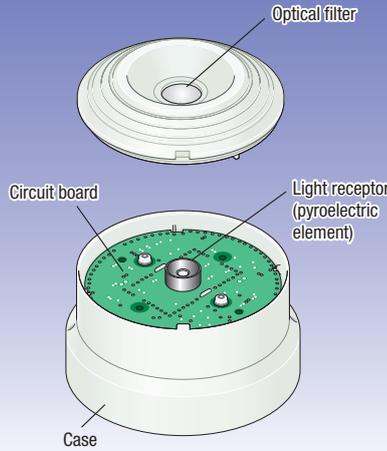


# What is Flame Detector (Spot Type Infrared Flame Detector)?



**DRC-13RLK**



## This is the detector.

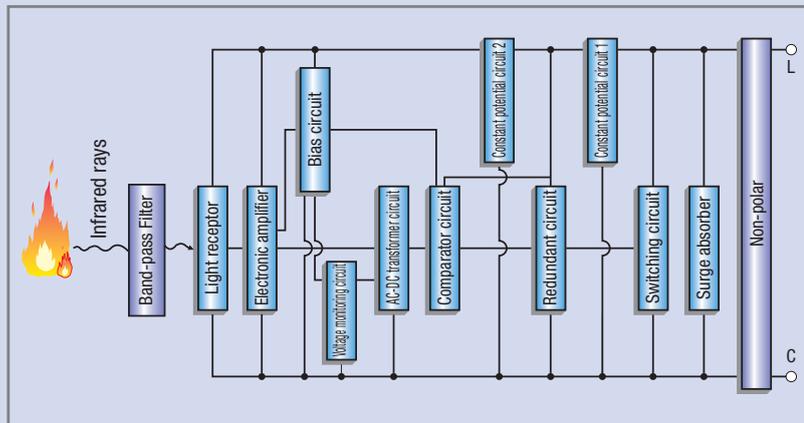
The IR detector triggers a fire alarm when the infrared rays emitted from flames exceed a pre-determined value. There is also an UV detector that can detect the ultraviolet rays emitted by flames.

## Suitable for these places.

- For buildings with high ceilings such as theatres, atria, warehouses and gymnasiums.
- For buildings with ventilation from the outside such as car parks and factories in which conventional fire detectors cannot function effectively.

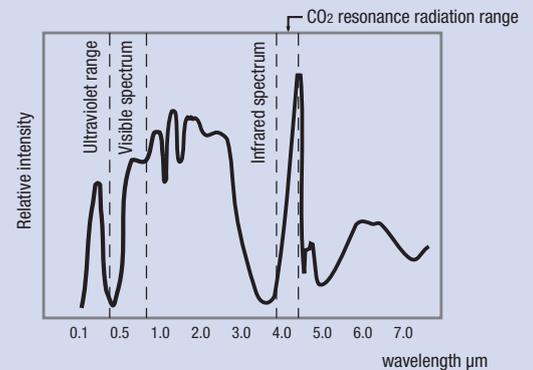
## Mechanism of the Flame Detector (Spot Type Infrared Flame Detector)

Functions by capturing the specified wavelength of the infrared spectrum from the flame. During a fire, a phenomenon called the "CO<sub>2</sub> resonance radiation" occurs. The light receptor (pyroelectric element) will receive light of the wavelength of the "CO<sub>2</sub> resonance radiation" through its optical filter to determine if the alarm will be triggered.

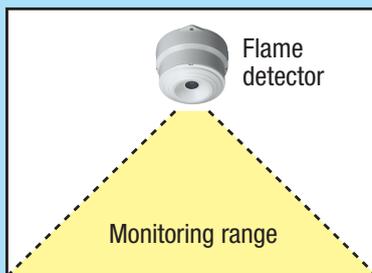


### CO<sub>2</sub> resonance radiation (fluctuating)

In the flames of a fire, there is a phenomenon of infrared rays radiated by large amounts of carbon gases peaking at a wavelength of 4.3μm~4.5μm with a 2~15H fluctuation. This is caused by the combustion of materials and is known as CO<sub>2</sub> resonance radiation as indicated in the diagram below.



### Normal conditions

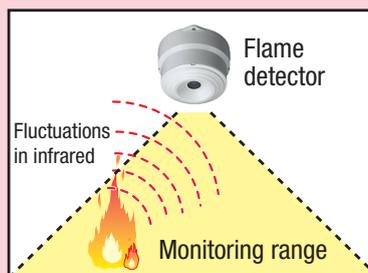


Detector does not activate if no infrared in monitoring range.

#### Warning

False alarm might occur with sunlight (direct or reflected), movement of light emitting objects (lamps etc.) and light from welding etc.

### During fire



Triggers fire alarm when the captured level of infrared fluctuation (CO<sub>2</sub> resonance radiation) of burning objects exceeds the pre-determined level in a fire.

### Nominal monitoring distance and monitoring angle

The monitoring angle will differ from the characteristics of the light receptor. Set the area to be monitored within the nominal monitoring distance.

