

Inside the Technology!

SafeFlame's UV/IR Flame detector uses an ultra high signal to noise ratio UV sensor and a separate IR sensor to offer superior flame detection. The UV sensor offers superior sensitivity while the IR sensor ensures resistance to false alarms from things like solar spikes, arc welding, lighting and X-Rays. The IR sensor works on the 4.1-4.6 micron spectral range. The same spectral range as a fire. When the UV sensor in the SafeFlame detector senses that there is a fire it will automatically cross-check that signal with the one from the IR sensor. If both sensors detect a fire an alarm signal is generated.

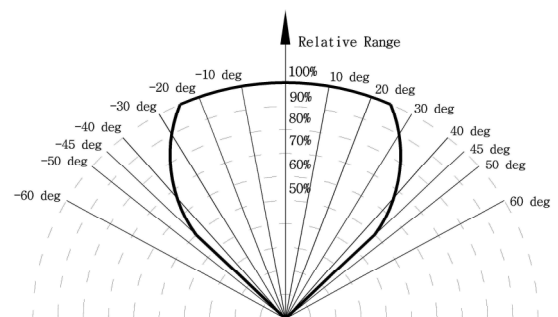
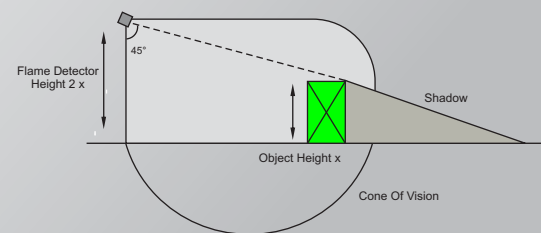


Detector Technology:

UV/IR detection uses pyroelectric (IR Detectors) and photoelectric (UV Detectors) effects to judge the change in temperature and radiation. When radiation from a fire hits the small pyroelectric crystal in the IR detector it causes the crystal to heat up sending an electronic signal out, causing an alarm to be triggered. An opposite electrical charge is given when the pyroelectric crystal is cooled down.

SafeFlame with UV detectors use photoelectric sensors to detect a fire. The radiation coming from the fire heats up the UV sensor causing electrons to flow signaling that a fire is present.

Operation Diagram:



[Figure 5] Cone of Vision

[Figure 1] Detector Exterior and LED indicator, its location



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