

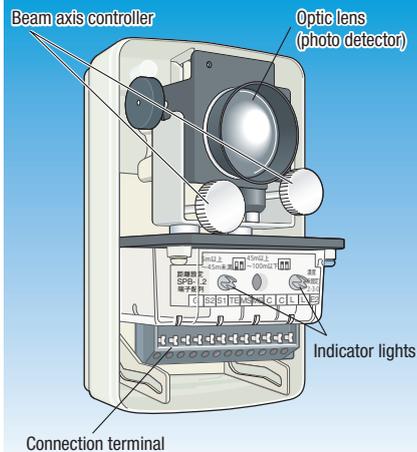
# What is Projected Beam Smoke Detector?



(Light receiver)

(Light emitter)

SPC-□A



## This is the detector.

Comprised of a light emitter and receiver which are installed facing each other at a specified distance. It will detect a fire due to a decrease in light quantity (infrared) in the receiver because of the smoke.

## Suitable for these places.

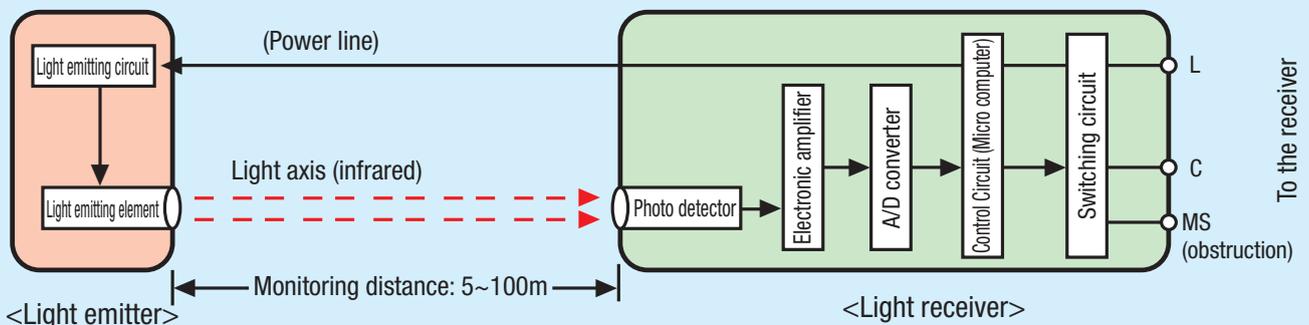
Suitable for buildings with high ceilings, large open areas or potentially hazardous places.

- Gymnasiums, lecture halls, theatres
- Factories, warehouses, vehicle bases
- Underground walkways, tunnels
- Chemical warehouses, substations, electrical rooms.
- In places whereby ceilings installations is to be avoided.

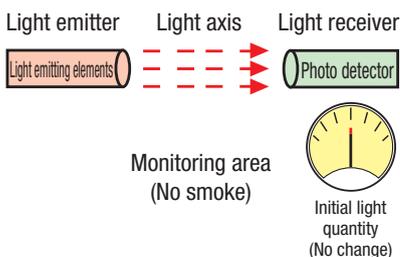
## Mechanism of Projected Beam Smoke Detector

The infrared light emitted from the emitter enters the photo detectors of the receiver and is converted to an electrical signal.  
The input signal is recorded as the first light quantity received and a fire alarm signal is sent when the specified level drops repeatedly.  
Also, a fault signal is sent if the beam axis is completely obstructed.

It contains a function to compensate for the change in value with time due to the misalignment of the light axis and contamination of the optics arising from the distortion of buildings.  
A fault signal is sent when this compensation reaches its limit.

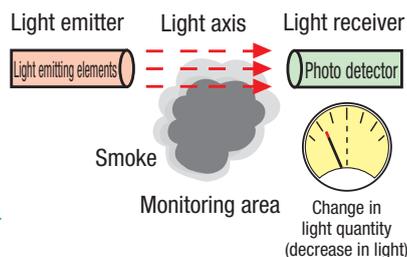


## Normal conditions



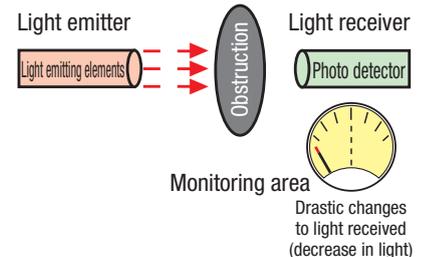
During normal conditions, the light emitted is received by the receiver as it is so there is no change from the initial light quantity received.

## During fire



A fire is reported when smoke decreases the light quantity received by the receiver from the emitter and is different from the pre-determined value of the initial light received.

## During obstruction



① Light axis blocked ② Not set up correctly during installation ③ Fault signal activated when optics contamination threshold is reached etc.