

The proposed smoke fire detector would generate a fire alarm signal when the intensity of the scattering of the infrared radiation changes due to the increase of optical density of air induced by the presence of smoke. The fire detector contains a circuit consisting of a capacitor and a resistor connected in series. This circuit provides flashing of the light-emitting diode indicator of the smoke detector when the detector operates in a stand-by mode. As a result, the performance monitoring of the fire detector is possible without increasing consumed power.