

Laser fire sensor for early detection of catchings fire comprises laser (1), first collimating optical system (4), retroreflector array (5), receiving optical system (6), charge-coupled device (7), analog-to-digital converter (8) and analyzing device (9). Additionally it comprises beam splitter (2), second collimating optical system (10) and mirror (3), wherein an output of the laser (1) is optically coupled to an input of the beam splitter (2), a first output of which is optically coupled to an input of the first collimating optical system (4), an output of which is coupled to an input of the retroreflector array (5), an output of which is coupled to an input of the optical receiving system (6), an output of which is coupled to a charge-coupled receiving device (7), an output of which is connected to an input of the analog-to-digital converter (8), an output of which is connected to an input of the analyzing device (9), a second output of the beam splitter (2) is optically coupled to an input of the mirror (3), an output of which is optically coupled to an input of the second collimating optical system (10), an output of which is coupled to the input of the retroreflector array (5), and an output is coupled to the input of the optical receiving system (6).