

Title (en)
ULTRA-SHORT WAVELENGTH PHOTOELECTRIC SMOKE DETECTOR

Title (de)
PHOTOELEKTRISCHE RAUCHMELDUNG MIT ULTRAKURZER WELLENLÄNGE

Title (fr)
DETECTEUR DE FUMEE PHOTOELECTRIQUE A LONGUEUR D'ONDE ULTRACOURTE

Publication
EP 1194908 A1 20020410 (EN)

Application
EP 00914824 A 20000303

Priority
• US 0005734 W 20000303
• US 12298199 P 19990305

Abstract (en)
[origin: WO0195279A1] A photoelectric smoke detector incorporates a short wavelength radiant energy emitter (14). The emitter, an LED or laser diode, emits frequencies in a range of 430 to 450 nanometers. The emitted frequencies can be further shortened by directing them to impinge on a non-linear crystalline material (22). Radiant energy emitted from the material will have a wavelength on the order of sixty percent that of incident radiant energy (14'). The short wavelength energy will be scattered by airborne particulate matter characteristic of relatively fast, flaming fires. The emitter, an LED or laser diode can include an 880 or 940 nm wavelength coupled with shorter wavelength ranges (190-450 nm) with associated detection. It also has the capability of detecting slow burning smoldering-type fires. A control circuit and an audible output device provide a local audible alarm of a detected fire.

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IPC 8 full level
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G08B 17/107 (2013.01); **G08B 17/113** (2013.01)

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