

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 A4 20041013 (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.

IPC 1-7

**G08B 17/10**

IPC 8 full level

**G08B 17/107** (2006.01)

CPC (source: EP)

**G08B 17/107** (2013.01); **G08B 17/113** (2013.01)

Citation (search report)

- [Y] US 5741595 A 19980421 - WADA HIROYUKI [JP], et al
- [Y] GOODMAN D S: "METHOD FOR LOCALIZING LIGHT-SCATTERED PARTICLES", IBM TECHNICAL DISCLOSURE BULLETIN, IBM CORP. NEW YORK, US, vol. 27, no. 5, 1 October 1984 (1984-10-01), pages 3164, XP002066860, ISSN: 0018-8689
- See references of WO 0195279A1

Cited by

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