

Title (en)

THERMOPILE INFRARED INDIVIDUAL SENSOR FOR MEASURING TEMPERATURE OR DETECTING GAS

Title (de)

THERMOPILE INFRAROT EINZELSENSOR FÜR TEMPERATURMESSUNGEN ODER ZUR GASDETEKTION

Title (fr)

CAPTEUR ÉLÉMENTAIRE INFRAROUGE THERMOPILE POUR MESURES DE TEMPÉRATURES OU DÉTECTION DE GAZ

Publication

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Application

EP 17729482 A 20170613

Priority

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Abstract (en)

[origin: WO2017220381A1] The invention relates to a thermopile infrared individual sensor in a housing that is filled with a gaseous medium having optics and one or more sensor chips with individual sensor cells with infrared sensor structures with reticulated membranes, the infrared-sensitive regions of which are spanned by, in each case, at least one beam over a cavity in a carrier body with good thermal conduction. The object of the invention consists of specifying a thermopile infrared sensor using monolithic Si-micromechanics technology for contactless temperature measurements, which, in the case of a sufficiently large receiver surface, outputs a high signal with a high response speed and which can operate in a gaseous medium with normal pressure or reduced pressure and which is producible in mass produced numbers without complicated technology for sealing the housing. This is achieved by virtue of, in each case, combining a plurality of individual adjacent sensor cells (18) with respectively one infrared-sensitive region with thermopile structures (14, 15) on the membrane (12) on a common carrier body (1) of an individual chip to a single thermopile sensor structure with a signal output in the housing, consisting of a cap (12) sealed with a base plate (3) with a common gaseous medium (10).

IPC 8 full level

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