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(54) Title: GAS SENSOR

(57) Abstract

The invention relates to a gas sensor (A) which is adapted for evaluating the contents of a gas sample enclosed in a cavity (2) or a gas cell (1). The gas sensor has the form of a block in which the wall or wall-parts of a gas cell or cavity have highly light-reflective properties, designated mirror surfaces (11A, 12A). The cavity (2) has an opening (2a) for incoming light rays which are reflected in the cavity a predetermined number of times such as to create an optical analysis path before being caused to pass through an opening (6) for outgoing light rays, such reflections being achieved with the aid of three opposing, concave light-reflecting wall-parts (11, 12, 13). A first of the light-reflecting wall-parts (11) has the shape of part of an ellipsoid. A second (12) and a third (13) of the light-reflecting wall parts have a common shape conforming to part of an ellipsoid. The focal points (11a, 11b) for the first light-reflecting wall-part (11) are disposed in or close to mirror surfaces (12A, 13A) for the second (12) and the third (13) wall-parts. A focal point (12a) for the second wall-part (12) and a focal point (13a) for the third wall-part (13) are located in or close to the mirror surface (11a) of the first wall-part (11).

