

Title (en)

OPTICAL MODULE COMPRISING A SPACER ELEMENT BETWEEN THE HOUSING OF A SEMICONDUCTOR ELEMENT AND A LENS UNIT

Title (de)

OPTISCHES MODUL MIT DISTANZELEMENT ZWISCHEN DEM GEHÄUSE EINES HALBLEITERELEMENTS UND EINER LINSENEINHEIT

Title (fr)

MODULE OPTIQUE COMPORTANT UN ELEMENT D'ESPACEMENT ENTRE LE BOITIER D'UN ELEMENT A SEMICONDUCTEURS ET UNE UNITE DE LENTILLES

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Application

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Abstract (en)

[origin: WO2005031422A1] The invention relates to an optical module comprising a circuit carrier (10), a housed semiconductor element (12) that is arranged on the circuit carrier (10), and a lens unit (14; 16, 18, 20; 21) for projecting electromagnetic radiation along an optical axis (33) towards the semiconductor element (12), the housed semiconductor element (12) and the lens unit (14; 16, 18, 20; 21) being embodied as two components. According to the invention, at least one spacer element (35) is arranged outside the optical axis (33), between the housing (13) of the semiconductor element (12) and the lens unit (14; 16, 18, 20; 21). Due to the addition of a low-cost spacer element (35), the invention enables the simple compensation of possible remaining work tolerances, for example between client-specific semiconductor housings (13) and lens units (14; 16, 18, 20; 21) selected from lines of products of different production quality. While tolerance-exceeding lines of products have not had any use until now as rejects, reliable camera modules can advantageously be assembled using a compensation element (35) according to the invention, and in principle, any mechanical adjustment of the focal point can also be dispensed with. Such camera modules can especially be applied inside a motor vehicle or to the outside of the same.

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