

Title (en)  
OPTICAL MODULE AND OPTICAL SYSTEM

Title (de)  
OPTISCHES MODUL UND OPTISCHES SYSTEM

Title (fr)  
MODULE OPTIQUE ET SYSTEME OPTIQUE

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Abstract (en)  
[origin: WO2005031808A2] The invention relates to an optical module comprising a lens holder (14) containing a lens arrangement consisting of, for example, three lenses (16, 18, 20) and a diaphragm (21). Preferably, the lenses (16, 18, 20) and optionally the diaphragm (21) are unequivocally oriented by the geometrical form thereof in such a way that no other optical adjustment is required. According to the invention, the optical module has a specially embodied circuit carrier (10) comprising a thin region (10a) and a thick region (10b) that holds the thin, relatively sensitive region (10a) as in a frame, the thin region (10a) preferably carrying a semiconductor element (12). Along with the particularly low tolerances between the semiconductor element (12) and the lens unit (14; 16, 18, 20; 21), the invention advantageously enables a more reliable assembly (e.g. soldering, gluing or the like) of a semiconductor element (12), for example by means of a flip-chip technique, on a thin and thus relatively stable, flat plane (10a), than comparable assembly processes of components on exclusively flexible circuit carriers. The invention is especially suitable for applying inside a motor vehicle or on the outside of the same.

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