

Title (en)
OPTICAL MODULE AND OPTICAL SYSTEM

Title (de)
OPTISCHES MODUL UND OPTISCHES SYSTEM

Title (fr)
MODULE OPTIQUE ET SYSTEME OPTIQUE

Publication
EP 1665342 A2 20060607 (DE)

Application
EP 04766746 A 20040909

Priority
• EP 2004052096 W 20040909
• DE 10344767 A 20030926

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.

IPC 1-7
H01L 21/00

IPC 8 full level
H01L 31/0232 (2006.01); **H01L 33/58** (2010.01)

CPC (source: EP US)
H01L 33/58 (2013.01 - EP US)

Citation (search report)
See references of WO 2005031808A2

Designated contracting state (EPC)
DE FR GB IT

DOCDB simple family (publication)
WO 2005031808 A2 20050407; WO 2005031808 A3 20050721; DE 10344767 A1 20050504; DE 10344767 B4 20100617;
EP 1665342 A2 20060607; JP 2007506997 A 20070322; JP 4604036 B2 20101222; US 2006239631 A1 20061026; US 7670064 B2 20100302

DOCDB simple family (application)
EP 2004052096 W 20040909; DE 10344767 A 20030926; EP 04766746 A 20040909; JP 2006527394 A 20040909; US 57353906 A 20060327