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(54) **Title:** OPTICAL MODULE

(54) 发明名称: 一种光模块

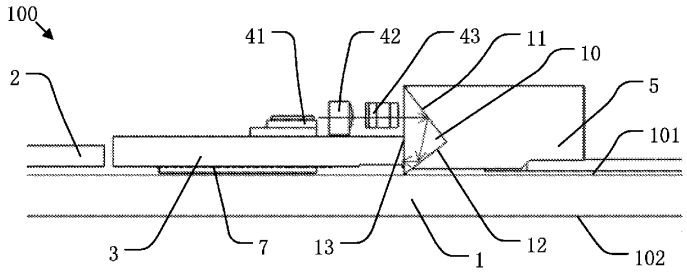


图 4

(57) **Abstract:** The present application discloses an optical module. The optical module comprises a housing, a circuit board arranged in the housing, an electric driving chip, a silicon optical chip, a laser and a light guide device. The electric driving chip and the silicon optical chip are connected to a first surface of the circuit board; the laser is arranged on the surface of one side of the silicon optical chip away from the circuit board; the laser emits light and transmits the emitted light to the silicon optical chip; the light guide device guides the light emitted by the laser into the silicon optical chip. According to the present invention, the silicon optical chip capable of generating heat, a light source assembly and the electric driving chip are located on the surface of the same side of the circuit board, such that a heat dissipation assembly can be arranged at a position of the same side of the circuit board, and therefore, heat dissipation in the optical module is facilitated, and centralized accumulation of heat in the optical module is avoided; in addition, no grooves need to be dug in the circuit board to contain a heat sink, the silicon optical chip and the light source assembly, so that the utilization rate of the circuit board is improved, and the manufacturing cost is reduced.

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RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN, TD, TG)。

根据细则4.17的声明:

- 关于发明人身份(细则4.17(i))
- 关于申请人有权申请并被授予专利(细则4.17(ii))
- 发明人资格(细则4.17(iv))

本国际公布:

- 包括国际检索报告(条约第21条(3))。

(57) 摘要: 本申请公开了一种光模块。该光模块包括壳体和设于所述壳体内的电路板、电驱动芯片、硅光芯片、激光器以及导光装置；所述电驱动芯片及所述硅光芯片连接至所述电路板的第一表面；所述激光器设置于所述硅光芯片远离所述电路板一侧的表面，所述激光器发出光并将发出的光传输至所述硅光芯片，所述导光装置将所述激光器发出的光导入所述硅光芯片。本发明通过将产生热量的硅光芯片、光源组件与电驱动芯片位于电路板的同一侧表面，这样可在电路板的同一侧位置设置散热组件，有利于实现光模块内部散热，避免光模块内部热量集中堆积；而且不用在电路板上挖设凹槽放置热沉，硅光芯片及光源组件，提高了电路板利用率，减少了制作成本。