ABSTRACT

An airtight optical module, comprising: a box-shaped tube shell (10), a rear end wall (113) of which is provided with a channel groove (1130); a connector (30), which is embedded in the channel groove (1130), and has an upper layer surface (301) provided with a direct-current signal line (3D), and a lower layer surface (303) provided with a high-frequency signal line (3G), wherein the upper layer surface (301) is open upwards and comprises a first area (301a) located in front of the rear end wall (113) and a second area (301b) located behind the rear end wall (113), and the lower layer surface (303) comprises a third area (303a) which is located in front of the rear end wall (113) and is open upwards, and a fourth area (303b) which is located behind the rear end wall (113) and is open downwards; a chip carrier assembly (40), which is arranged in the tube shell (10), and comprises an optical chip (41) and a carrier (43), wherein the chip carrier assembly (40) is electrically connected to the direct-current signal line (3D) of the first area (301a) and the high-frequency signal line (3G) of the third area (303a); and a circuit board (20), the lower surface (23) of which is provided with a high-frequency signal line (3G) and is connected to a high-frequency signal line (3G) of the fourth area (303b) by means of a gold wire (53), and the upper surface (21) of which is provided with a direct-current signal line (3D) and is connected to a direct-current signal line (3D) of the second area (301b) by means of a gold wire (51). In this way, a high-frequency signal interconnection gold wire between the connector (30) and the circuit board (20) is short, thereby optimizing the high-frequency performance.

Fig. 1b