

APPLICATION NOTE

Issue 27



LEDs

countersunk and wire-bonded in a two-stage cavity



This flex-rigid circuit board is used in an ophthalmoscope, which is used to simulate eye examinations.

One side of the circuit board is equipped with IR LEDs and then covered with black glass. For this reason, the IR LEDs must be flush with the surface of the circuit board.

Unhoused LED chips are used here for miniaturisation and positioning accuracy reasons. These are connected to the circuit board using wire bond technology.

Several high-precision two-stage cavities were also made in the circuit board with the laser. The LEDs are glued in a conductive manner at the lower potential and wire-bonded at the upper potential.



IR LED in a round cavity

Technology at a glance:

- Flex-rigid circuit board 1F-5Ri with two-stage cavities
- An SMD assembly coordinated to the wire bonding process
- Positioning of the chip and gold wire bonding of the IR LEDs
- Black glass assembly

