Component Construction

LEDs

The basis for an LED is a lead frame with treated surface. The chips are mounted in a reflecting tray in order to increase the light output.

The contacts are made on the cathode side by means of conductive adhesive and on the anode side via a gold wire to the lead frame. The plastic case encloses the chip area of the lead frame and determines the radiation characteristics as an optical system.

The special plastic material provides the component with high resistance against moisture and mechanical effects.

Displays

The LED chips are mounted with conductive adhesive on a lead frame. This frame is cast into the display housing which, with its highly reflective light channels, simultaneously provides the external and the segment configuration.

This construction provides the display with special characteristics: wide operating temperature range, protection against environmental effects; uniform, bright segment illumination; resistance to shock and vibration.

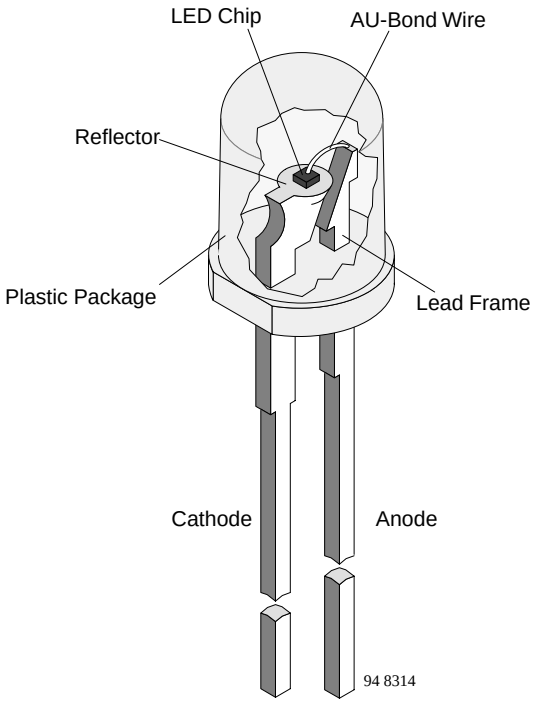

Figure 1. Standard LED design

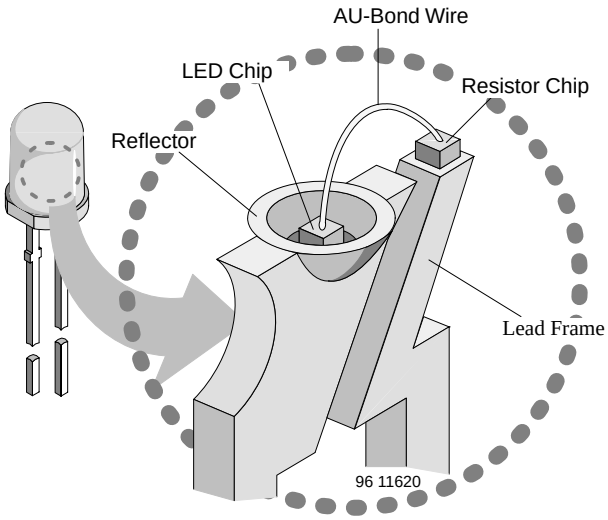

Figure 2. Resistor LED design

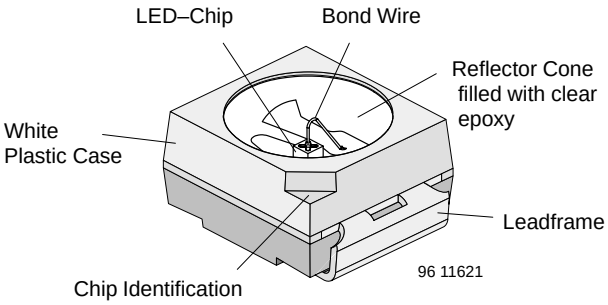

Figure 3. Typical SMD design

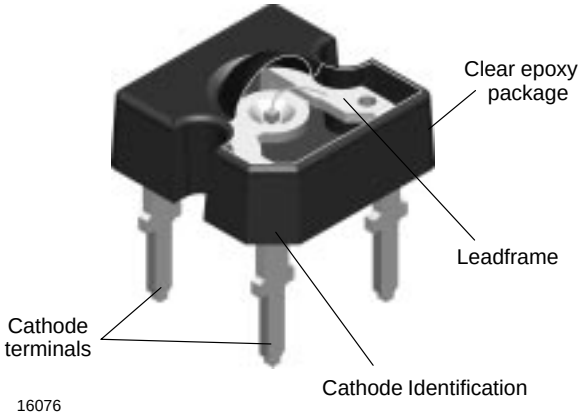

Figure 4. Typical Telux design

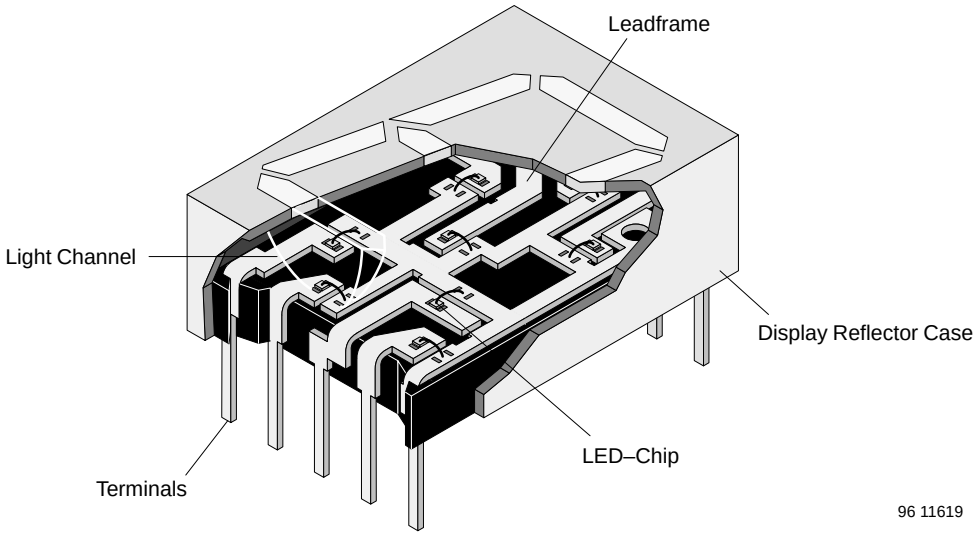

Figure 5. Typical display design