



LIGHT EMITTING DIODES

Packages

Generally, LEDs are mounted in the package that provides two electrical leads, a transparent optical window for the emission and heat-sinking. An LED chip is soldered/ glued to the package surface that is connected to the one of the lead wires. The top contact of the chip is connected to the other lead with a bonding wire.

We offer a [range of standard packages](#) for LEDs and LED-matrices as follows:

✓ TO-type packages:

TO18 – appropriate for mounting one-element LEDs, single-wavelength matrices, 2-wavelength matrices

TO5 (TO39) – appropriate for mounting one element LEDs or LED-matrices

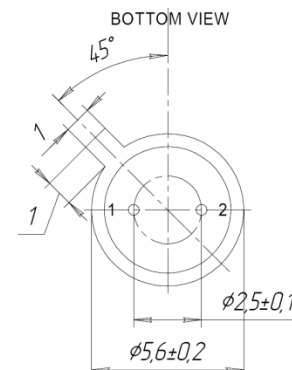
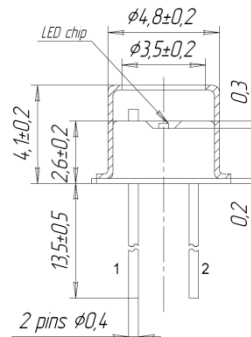
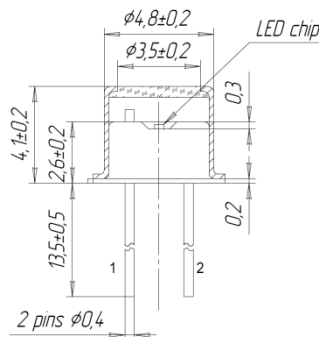
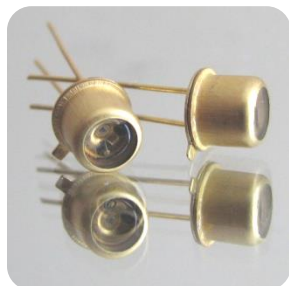
TO8 – appropriate for mounting multi-element LED-matrices

✓ SMD type packages:

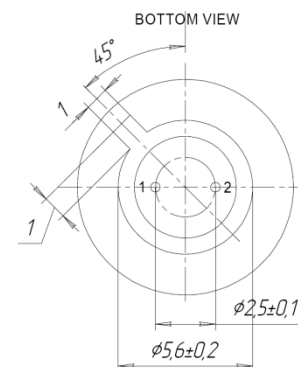
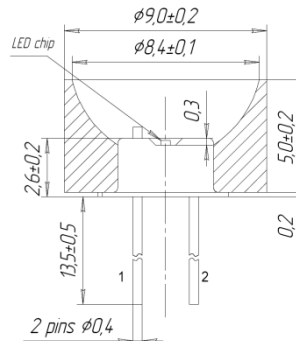
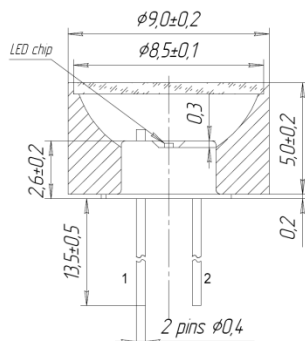
CS3 (SMD 3 × 3 mm), **CS5** (SMD 5 × 5 mm), **CS5R** (SMD 5 × 5 mm with microreflector) – appropriate for mounting one-element LEDs or single-wavelength matrices

CS5R-3M (SMD 5 × 5 mm) – appropriate for mounting three-element LED-matrices

TO18



TO18-R TO18-RW



- Very miniature packages with limited area for mounting
 - Material – kovar, finish – gold/plating
 - The number of lead pins is 2 or 3
 - Equipped with a [cap](#) (with/without a glass window) or a [parabolic reflector](#) (with/without a glass window)
- [Cap](#) protects LED device from damage
- [Parabolic reflector](#) with a glass window (RW) or without a window (R) protects LED device from damage and provides at reduction of the radiation divergence.