

Figure 3.30 The construction of low power (left) and high power (right) LEDs

LEDs generally have a long life and may last up to 100,000 hours. LEDs generally emit light in a relatively narrow band so that most LEDs produce light that is a saturated colour. It is possible to make white LEDs by using a blue or ultraviolet chip and putting a phosphor coat round it. White can also be achieved by combining a mixture of red, green and blue chips.

LEDs have a lot of applications associated with signals and signage. The use of saturated colours in these applications is a real bonus. This coupled with the ease of producing light in a number of small units means that LEDs are replacing a number of other light sources in these areas. It is also possible to make lamps that are a cluster of LEDs of different colours. By controlling the outputs of the different colours it is possible to make a lamp that can produce light in a wide variety of colours. At the time of writing, white LEDs are making fast technical progress but have not proved to have that many applications in the area of general lighting as the lumen packages tend to be small and their efficacy does not compare favourably with other sources such as fluorescent lamps.

3.3.10 Electroluminescent

The basic principles of electroluminescent (EL) light sources are discussed in section 3.1.3. Generally the light sources are made up as panels with a construction similar to that shown in Figure 3.31.

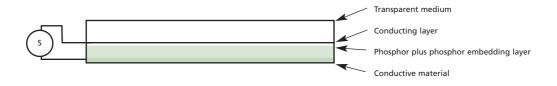


Figure 3.31 A section through an electroluminescent panel