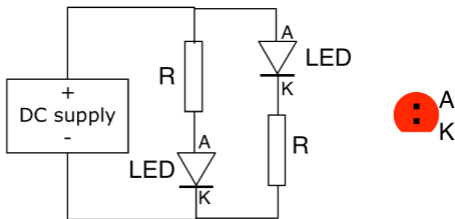Light-emitting diodes (LEDs) must be connected to a DC supply via current limiting resistors. Two possible arrangements are shown in the diagram.

R is the resistor and it doesn't matter which direction this is connected. The two terminals of the LED are designated A (anode) and K (cathode). It **does matter** which way these are connected. The K lead is identified in a new LED as having the shorter lead. It is also the lead closer to the flat segment on the flange of the LED body.

The voltage drop across a LED of the type in this pack is typically 2V and it requires about 15mA (.015A) of current for reasonable brightness. **(Do not exceed 50mA.)** The value of resistor is calculated as:

(Supply voltage - 2V) ÷ Current required

For a 12V supply and 15mA current, the required resistor is 10 ÷ 0.015 = 667 ohms. The nearest standard resistor value is 680 ohms.