

Instruction 'how to connect 3 LEDs to 12 volts' (20 mA leds)

The 120 ohms resistors are available to connect three LEDs to 12 volts.

This is how it works:

Plus 12V -----LED-----LED-----LED-----RESISTOR----- minus
(The resistor could also be placed at the plus side, it doesn't matter)

A LED has a long and a short end.

The long end is the plus, the short end is the minus.

If you would like to connect a chain like above, you should connect the first LED's long end to the positive power supply. The short end of that first LED should be connected to the second LED's long end. The short end of the second LED should be connected to the long end of the third LED. Finally, the third LED's short end should be connected to the negative side of the power supply.

Example:

Take the fact that you'd like to make 12 LEDs working at a 12 volts source.

You have to make 4 chains like the one above.

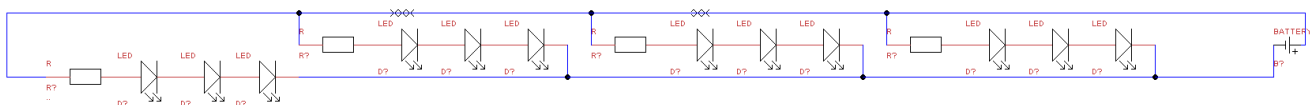
You put those 4 in parallel (like the rails of a train track).

So:

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|-----LED-----LED-----LED-----RESISTOR-----|
|-----LED-----LED-----LED-----RESISTOR-----|
plus ---|-----LED-----LED-----LED-----RESISTOR-----|----- minus
|-----LED-----LED-----LED-----RESISTOR-----|
    
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You should connect it like this:



Do you want to make something with a lot more LEDs? Then you should take this strategy, only with more chains.

BE AWARE: **3 LEDs to 12 volts only works for all 3.2-3.6 volts LEDs**
If you have bought 1.8-2.2 volts LEDs you should put 5
LEDs in series.