

Step – by – Step Kit Instructions for: Summer Lights 12v LED Kit

Your kit contains 4 red, 4 yellow, 2 green 5mm LEDs, one 47 Ω resistor, one 470 Ω test resistor and 2.3m wire.

Please make sure you know about or have read [soldering](#) & [soldering LEDs](#) – LEDs can be damaged if you don't know what you are doing.

You should make an LED tester so you can check their colours. It is important that there is only one green LED in each of the two circuits we are going to make. Look at the knowledge section in www.LEDfantastic.com to see how to [make an LED tester](#).

You can solder every joint as you go along but I suggest you try twisting all the circuit together without solder first to make sure everything is connected properly. Don't let bare wires touch each other - [short-circuits](#) should be avoided. When you have tested your circuit, solder everything to make sure it is permanent. If you are sure you know what you are doing or if you can't get the components to stay together, then you can solder some of the joints as you go along to make it easier.

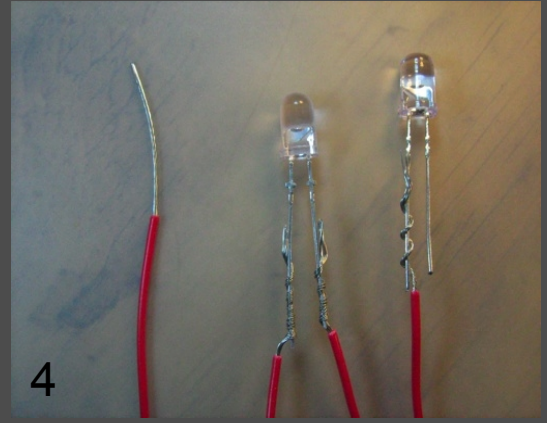
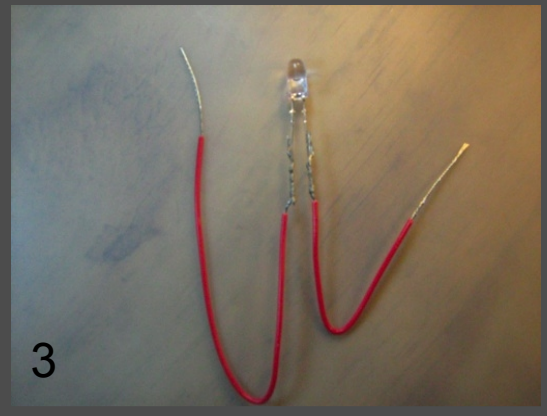
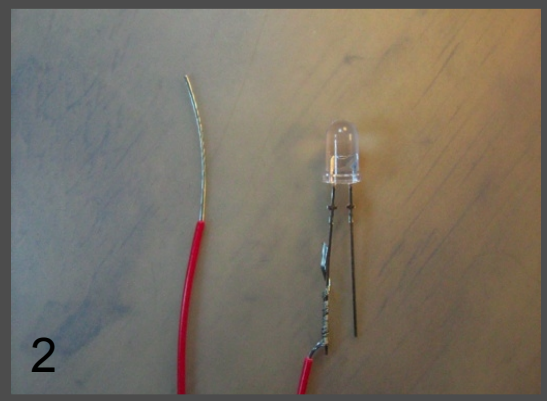
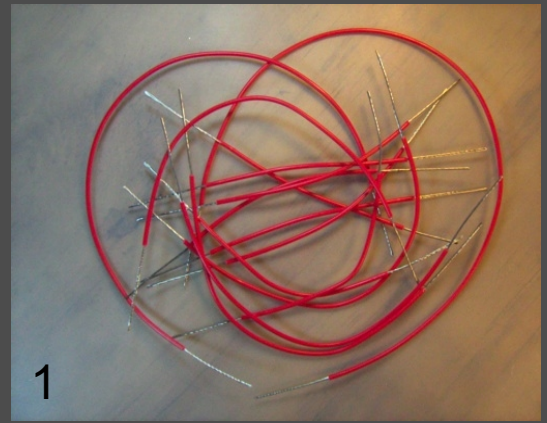
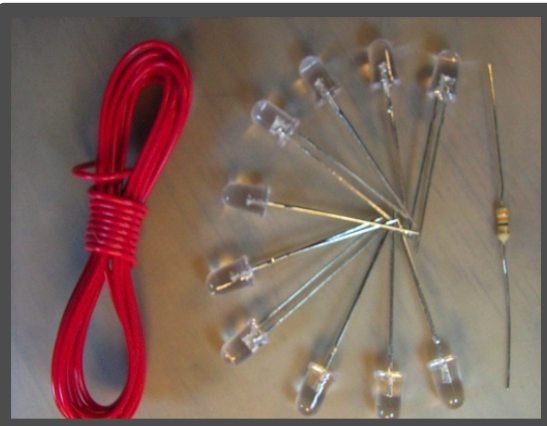
- 1 Cut your wire into 14 pieces, eight at 10cm, four at 15cm, one at 20cm and one at 25cm.

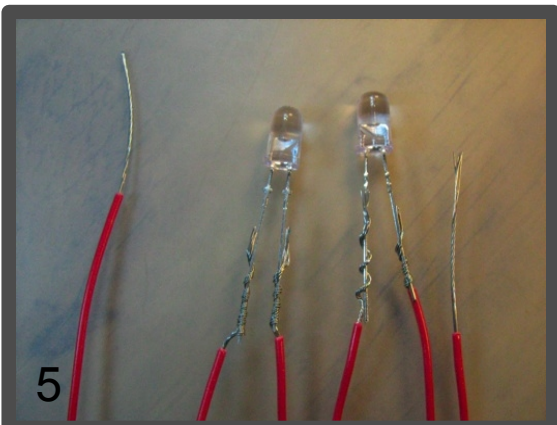
[Bare the ends](#) of each wire to about 2cm.

Make your kit in two halves, each is a separate circuit with 5 LEDs in each circuit . (ie do steps 3-7 twice...)

Be sure to have one green LED in each half.

- 2 Twist one end of a 15cm wire around the long (positive, cathode) leg of the first LED. This is the positive wire.
- 3 Take a 10cm piece of wire and twist its first end around the shorter (negative, anode) of the first LED.
- 4 Twist the other end of the 10cm wire around the 'positive', long leg of a second LED.





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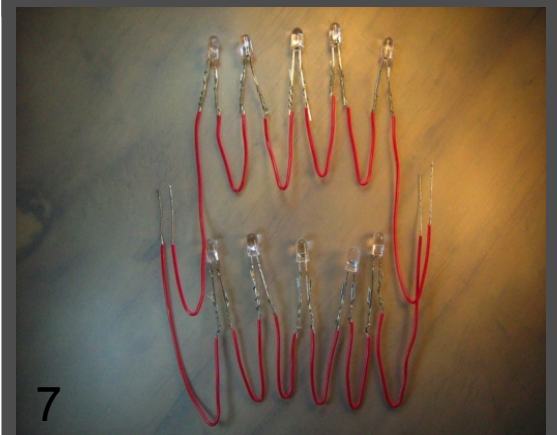
5 Join a second piece of 10 cm wire to the negative leg of the second LED and the positive leg of the third LED. Continue with the third, fourth and fifth LEDs. *Remember you can only have one green LED in each set of five.*



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6 Join a 15cm wire to the short leg of the last LED. This is the negative wire.

Go back to step (2) and make a second circuit identical to the one you just made.



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7 Join the two circuits together. Be sure to connect the two positive wires together and the two negative wires together.

8 Connect one of the wires of the unmarked resistor to the joined positive wires.

It doesn't matter which end you choose, resistor's aren't fussy which way the power goes.

8 Join a 20cm wire to the other end of the resistor. Join the negative wires to the last 25cm wire.

*You are now ready to **apply power**.*

*The wire that leads to the resistor should be connected to the positive side of the 12V supply while the other end goes to negative. You should join your new circuit to **12v DC only** either by soldering, using **crocodile clips** or maybe a **cigar lighter plug**.*



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When you have your circuit working & soldered properly, you should consider **insulating it**.

All the coloured text in these instructions refer to sections found at www.LEDfantastic.com. **Blue** refers to knowledge links and **green** refers to components and equipment for sale....

For further help, advice, inspiration, kits and workshop information, visit

www.LEDfantastic.com

