



# LED Christmas Lights LED Replacement

Install a replacement LED in a strand of LED christmas lights.

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## INTRODUCTION

Although these lights have a three-year guarantee, it's cheaper to fix them yourself than to pay the postage to send the lights back. I bought T1 3/4 (5 mm) LEDs from Digikey, looking for anything in the 800 mcd or up range in the proper colors. I ended up buying:

404-1096-ND (red)

404-1097-ND (orange)

C503B-BCS-CV0Z0461-ND (blue)

C503B-GCN-CY0C0791-ND (green)

404-1092-ND (yellow)

The LEDs are wired in series in groups- three groups to a strand. If one LED in the group has failed, none in that group will light. The trick is to find out which one (or ones) is bad.

Its easiest if you have one working strand or part of a strand. If so, remove one LED from the good strand, and use that socket to test each LED, one at a time, from the bad strand. If the LED doesn't work in the good strand, replace the LED according to the directions that follow. There may be more than one bad one, so after replacing,if the bad strand still doesn't light up, go on to the next LED.

If you don't have a good strand to test with, and don't have another way to test the LEDs, then remove each LED, one at a time from the bad strand, and check the leads to make sure they're not broken. If broken, replace, if not, put the LED back and go on to the next one.

### TOOLS:

- [Flush Wire Cutters](#) (1)

### PARTS:

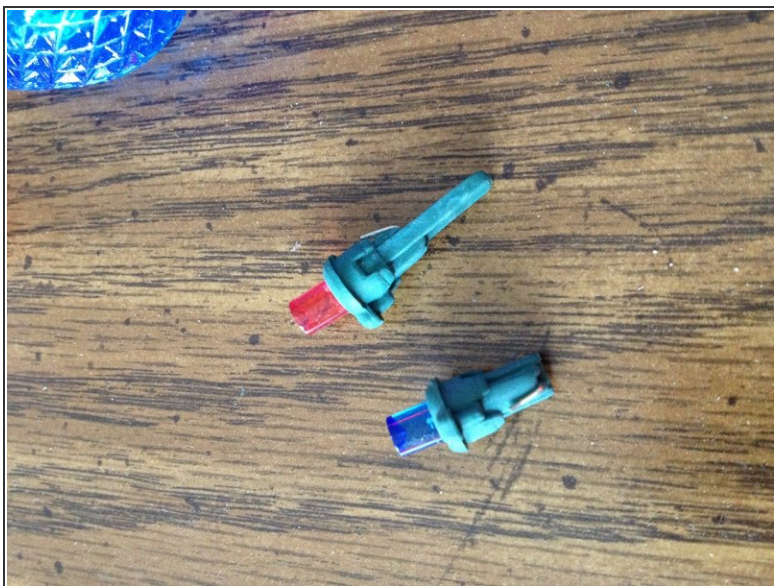
- [LED replacements listed in introduction](#) (1)

## Step 1 — LED



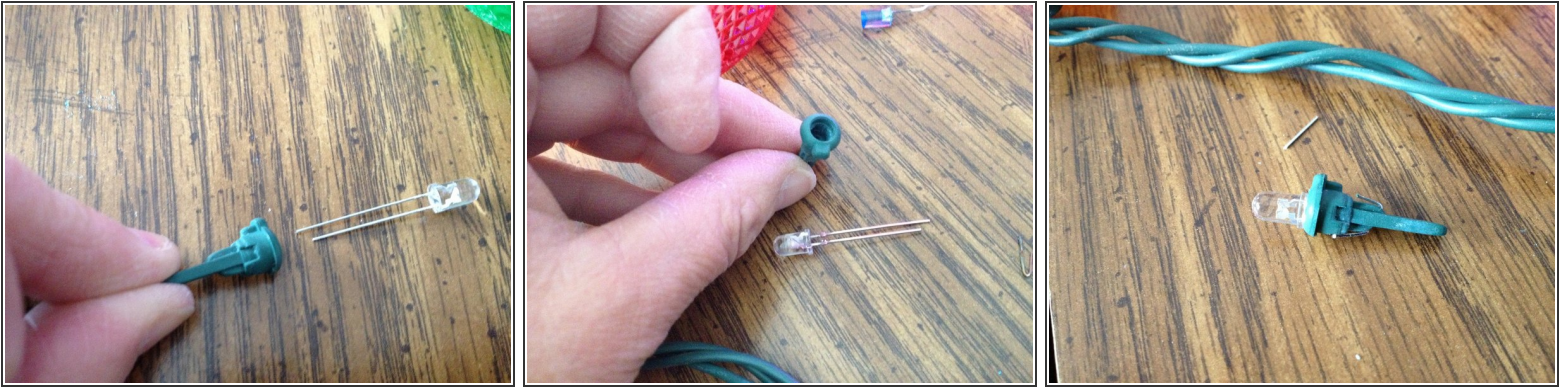
- 'Getting the faceted "bulb "off. The colored lamp covers snap out- some are pretty stiff but they do come out. They don't unscrew.

## Step 2



- Remove the LED and its plug. In the strands I have, there were two different styles that are not interchangeable.
- Notice the socket is keyed- it can only go into the socket one way.

## Step 3



- Remove the bad LED from the plug so you can re-use the plug. Notice the new LED has one leg longer than the other.
- **The long lead goes into the side of the plug with the key** as shown in the picture.
- The bulb of the LED may not seat perfectly but who cares, it will be under the plastic faceted bulb cover.
- Bend the leads up and cut.
- Try bulb in your "good" strand if you have one. If it works, put it into your bad strand and see if that has fixed the problem. If not, you know the LED is good now, so go on to the next one.

To reassemble your device, follow these instructions in reverse order.