



3D Crystal Light Base



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Summary

Light up base for a 12x8x6cm 3d crystal from 3dcrystal.com

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Tags: [led](#) [crystal](#) [battery](#) [laser](#) [lightup](#)

Summary

Designed a LED light up base for a crystal purchased from 3dcrystals.com. Uses 3 AA batteries and 4 LEDS to provide 7-10 days of run time.

Non-Printable Supplies

- Lillypad LEDS - https://www.amazon.com/dp/B07F24YS2V?ref=ppx_yo2ov_dt_b_product_details&th=1
- Rocker Switch - https://www.amazon.com/dp/B01N2U8PK0?psc=1&ref=ppx_yo2ov_dt_b_product_details
- Battery Box Springs - https://www.amazon.com/dp/B09NBQLDSG?psc=1&ref=ppx_yo2ov_dt_b_product_details
- Screws for Plastic - I had something laying around but you will need to find something that will work.
- 22 AWG stranded wire in black and red
- Soldering iron and solder

Printing Instructions

- **Base**

- Print in vertical orientation (back panel cutout opening facing up). This is primarily so that the sliding rails can be printed without supports.
- Use tree supports
- Use adaptive layer heights so that the radius corners come out looking good.
- Infill shouldn't matter but I used 15%

- **Back Cover**

- Print back side down (obviously)
- Infill shouldn't matter much but I used 15%
- Clearance will need to be added to the sides to fit in the slot in the main body. I got impatient printing and testing and ended up taking about .040" off of the part with my Bridgeport mill.

- **Battery Box**

- Print back side down
- Print with 100% infill or use the "cut" feature of your slicer to set 100% infill on the ears only and print the rest at whatever infill you would like.

Assembly Notes

- You will need to drill holes in your battery box and the standoffs for whichever plastic screws you select. You could also elect to simply glue the ears to the standoffs but that will prevent you from gaining access to the LEDs in the future if you ever need to.
- The standoffs in the body should only be drilled out about .150" to avoid coming through the other side.
- Use superglue to glue the LEDs into the main body. Once glued you can solder them in place with very minimal melting of the surrounding PLA (or whatever you are printing with)
- Pins on the rocker switch that I used will need to be cut down slightly so that it doesn't interfere with the battery box.

This remix is based on



Simple 3X AA Battery Box

by Fheder

Model files



body.stl



battery-box.stl



back-cover.stl

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