Kyber Crystal Jedi Crusader Pendant

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VIEW IN BROWSER

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Summary

An illuminated necklace designed to hold a kyber crystal from Disney's Galaxy's Edge theme park

Costumes & Accessories > Props

Tags: starwars cosplay jedi cosplayprop lightsaber galaxysedge kyber kybercrystal savis savisworkshop

Updates:

May 2024: Added a very tight 0.1mm tolerance version

June 2024: Added LED version

I designed this for my kid after they got a kyber crystal on our Disney trip and wanted to wear it. The design is based off the Jedi crusader pendant from The Last Jedi visual dictionary and will need a loop of leather or other cord to complete it. I painted mine and then weathered it as I've been informed it is a piece of Mace Windu's lost saber and needs to look appropriately old and tarnished.

Suggested Print Settings

0.1mm layer height, 40% infill, with 4-5 perimeters to ensure that the thin pillars of the bottom are printed solid

Notes on Variants

Tolerances and supports are the same for both the LED and NoLED variants. The LED variant requires a drop in battery powered LED. I sized the parts to fit this one from Amazon but I am not sure if it will fit other ones. There isn't a lot of space in the top for electronics so your mileage may vary if you get something different.

The LED variant also requires a diffuser part, there are a couple of different sizes, ideally you want the top of the crystal to seat right into the diffuser so the light goes right into it. Diffuser should be printed in a material which is translucent, I used natural ABS for mine but I think a natural PETG but a white which allows for decent light transmission like for a lithophane should also work. Ideally a translucent filament in a similar color to the crystal will give the best effect. They are really small and quick parts so maybe print a bunch and see how they go. You could also try printing it in a material that doesn't allow light to pass through and then just drill out the small center hole. I felt this drilled diffuser gave very dim illumination in my testing.

Notes on Tolerances and Supports

I have a few different versions of the model included here as the tolerances and tuning of your printer will affect the thread engagement. Ideally you want the part to threat together tightly and not open on its own but you do not want it so tight that it can't be unthreaded later.
The top piece does not change but the bottom has four thread options, very tight (0.1mm clearance), tight (0.2mm clearance), medium (0.3mm clearance), and loose (0.4mm clearance). On my Prusa MK3S I found that the 0.3 was too tight and the 0.4mm was the sweet spot. On my Voron V2.4 0.4mm was way too loose and I needed 0.1 or 0.2 depending on the material. You may want to cut the part down and just print the threaded portion to determine which is right for you. The same goes for the LED cap, find the correct tolerance to fit into the top part.
The other option that I have included is built in supports. Only the bottom part needs supports and you have the option of selecting none and doing it yourself, 0.1mm which will give a 0.1mm gap between the supports and the part, and 0.15mm which will give a 0.15mm gap. The 0.15 can be used with layer heights of 0.2mm without issue in my experience.

Additional Files

I have also included a model for a kyber crystal similar in dimensions to those found at Galaxy's Edge. I did not print that part as I have no need of

it but for those who don't have one from Disney and want to try out this model it is there for you. For best results I would suggest either resin printing the crystal or using a translucent filament and printing it solid. It is faceted to appear similar to the kybers sold so it doesn't gave a great print orientation. You can slice it in half and print that way without supports. There is one size of kyber which is very thin and will hang very low in the cage, in my experience this won't work well in the LED variant, I'm working on an alternate cage bottom to hold it in position better and will add it and update the listing when it's done.

For Gen 2 crystals also check out my adapters for the case to allow for it to be modified into a display piece.

Model files

Top 2 files

kybernecklace_top.stl

kybernecklaceled_top.stl

LED_Diffusers 3 files

kybernecklaceled_diffuser3mm.stl

kybernecklaceled_diffuser2mm.stl

kybernecklaceled_diffuser1mm.stl

LED_Caps 4 files

kybernecklaceled_ledcap_verytight01.stl

kybernecklaceled_ledcap_tight02.stl

kybernecklaceled_ledcap_loose04.stl

kybernecklaceled_ledcap_medium03.stl

Bottom_NoSupports 4 files

kybernecklace_bottom_verytight01mm_nosupports.stl

kybernecklace_bottom_tight02mm_nosupports.stl

kybernecklace_bottom_medium03mm_nosupports.stl

kybernecklace_bottom_loose04mm_nosupports.stl

Bottom_0.1Supports 4 files

kybernecklace_bottom_verytight01mm_supports01mm.stl

kybernecklace_bottom_tight02mm_supports01mm.stl

kybernecklace_bottom_medium03mm_supports01mm.stl

kybernecklace_bottom_loose04mm_supports01mm.stl

Bottom_0.15Supports 4 files

kybernecklace_bottom_verytight01mm_supports015mm.stl

kybernecklace_bottom_tight02mm_supports015mm.stl

kybernecklace_bottom_medium03mm_supports015mm.stl

kybernecklace_bottom_loose04mm_supports015mm.stl

Additional Files 1 file

kybercrystal.stl

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