

Single Press Lens Cap

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VIEW IN BROWSER

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Summary

Front lens cap that is parametric and can be resized to fit a variety of lenses.

1.02 hrs	1 pcs	0.20 mm	0.40 mm	PLA	11 g	Prusa MK3/S/S+

Gadgets > Photo & Video

Tags: camera lens cap lenscap

Need: Lens cap that can help prevent scratches and excess dust on the front element.

This is my take on a solution to that need.

This design uses common springs found in ball point pens. The spring dimensions are 4.5mm Diameter and 18mm long (uncompressed). There should be some tolerance in the length of the spring but I would not recommend going below 16mm and over 20mm. I had a few of these springs around but also ordered a 100 pack of them for around $8 to use for the other lens caps I needed.

I have included STLs for 48, 52, 58, 62, 72, 77, 88mm sizes as these are the lens sizes I have been able to test with.

This model is designed to be printed at a .2mm layer height. Printing at a thicker height may loose details needed for the part to function.

Assembly:

1. Place springs into cutouts of the press part, Push the springs as far in as they will go into the part
2. With the threaded features in the same direction, Insert the press part into the grooves of the main one
3. Push the parts together about half way
4. Make sure the springs are aligned to the holes in the main part then push the parts completely together.

I typically use 2 springs on most caps, placed on the left and right cutouts, for a decent amount of holding strength. If you are not able to locate 2 of the same or similar spring then place then proceed with only using 1 and placing it in the center.

Resizing/modifying the model:

1. Open the model in Fusion 360
2. Open the parameters panel
3. Change the parameter for the lens filter thread diameter
4. *Optional add text to the bottom of the cap containing the size of the cap. E.g. 52mm
5. *Optional add text to the top of the cap containing the lens the cap is for. E.g. 85 f1.8
6. Export each part and print

Feel free to remix this design, I would love to see your take on it!

Model files



48mmmain.3mf



48mmpress.3mf



52mmmain.3mf



52mmpress.3mf



58mmmain.3mf



58mmpress.3mf



62mmpress.3mf



62mmmain.3mf



72mmpress.3mf



72mmmain.3mf



77mmpress.3mf



77mmmain.3mf



88mmmain.3mf



88mmpress.3mf



parametric-lens-cap-v8.f3d

Print files



52mmlenscap_02mm_pla_mk3_1h1m.gcode

PLA 0.40 mm 0.20 mm 1.02 hrs 11 g Prusa MK3/S/S+

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