



Ultimate Open Lattice Top (8 Point Pattern)



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[VIEW IN BROWSER](#)

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Summary

A quick, fun, easy print. Top spins very well. Makes fun patterns as it spins.



5.02 hrs



3 pcs



0.10 mm



0.40 mm



PLA



19 g



Prusa
MK3/S/S+

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Tags: [toy](#) [spin](#) [fidgettoy](#) [fun](#) [fidgetspinner](#) [top](#) [happy](#)
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This print is great for all levels of experience. The open lattice pattern looks great still, but even better while it's spinning. The openings form patterns that change based on the viewing angle and the speed it's spinning.

Want to show off your top? Download my [Display Stand for Tops](#).

With a good twist, the top will spin for 15-20 seconds.

Thanks go to @CoMet for showing me my tops can be printed in 2 pieces and easily glued together precisely enough to spin as well or better than when I printed them as 1 piece. For those who want to work from the original 1 piece versions, I've added my original STLs with and without built-in supports.

I've shared my new files, including my GCODE, 3MF where I cut the top in 2, and the cleaned-up mesh files after working in PrusaSlicer, Fusion 360 and MeshLabs to create files that cause PrusaSlicer to say the three most beautiful words in the world "no errors detected."

This is a great design for 2 or 3 color filament, rainbow filament, or adding color changes by swapping filament.

Color Changes

I've added PrusaSlicer 3MF files and GCODE (MK3S+) for the top and bottom halves that include 4 color changes each (5 colors each in total). These are the files I used to create the pastel multi-colored top in the sample pictures.

Filament

If anyone's curious, I used OVV3D Tri-color Red-Yellow-Blue Silk PLA for the 1 color top. When it's spinning, this PLA looks purplish grey, but it shows the whole rainbow when it's still.

The yellow and black top (codename: Bumblebee), uses TTYT3D Silk PLA (Yellow and Black) and MatterHackers Silk Silver PLA.

The pastel top uses TTYT3D Silk PLA (White, Lime Green, Pink, Cyan, and Yellow).

Print Settings

If you don't use my 3MF file, I suggest you set perimeters to 8 (yes, really) and infill to 100%. The tops need the mass to spin well. Also, print external perimeters first. I couldn't explain why, but I've printed these a lot and are smoother if you print the outside first.

I added supports with an overhang angle of 20 degrees and used paint on supports to prevent supports from being added to the center of each top. The supports help a bit with the overhangs and blocking them from the center makes them a little easier to remove.

I set layer height to 0.1 mm because it looks so smooth and shows the details in the tops. I'm sure 0.15 would look just fine - especially if you want to just do a quick test to see what you think of the model.

Model files



8-point-top-sliced-v3.3mf



8-point-top-bottom-half.obj



8-point-top-top-half.obj



8-point-top-simplified-no-supports-repaired.stl



8-point-top-simplified-with-supports-v2.stl



8-point-top-top-half-5-colors.3mf



8-point-top-bottom-half-5-colors.3mf

Print files



8-point-top-sliced-v3_01mm_pla_mk3s_3h30m.gcode

⊗ PLA ⊗ 0.40 mm ≡ 0.10 mm ⌚ 3.50 hrs ⚖ 13 g 🖨 Prusa MK3/S/S+



8-point-top-top-half-5-colors_01mm_pla_mk3s_2h5m.gcode

PLA 0.40 mm 0.10 mm 2.09 hrs 7 g Prusa MK3/S/S+



8-point-top-bottom-half-5-colors_01mm_pla_mk3s_1h31m .gcode

PLA 0.40 mm 0.10 mm 1.52 hrs 6 g Prusa MK3/S/S+

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