

No Supports LEGO-Inspired Holiday Wreath



BN3D

[VIEW IN BROWSER](#)

updated 12. 12. 2023 | published 12. 12. 2023

Summary

LEGO-Inspired holiday wreath. All parts print without supports.



4.01 hrs



3 pcs



0.20 mm



0.40 mm



PLA



57 g



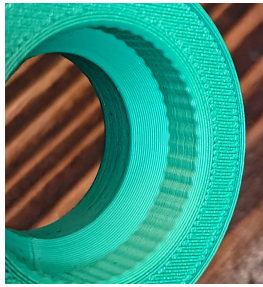
Prusa MK4

[Seasonal designs](#) > [Winter & Christmas & New Year's](#)

Tags: [christmas](#) [lego](#) [christmasdecoration](#) [holidays](#) [holiday](#) [holidaydecoration](#) [holidaydecor](#) [holidaydecorations](#) [legos](#) [legobricks](#) [holidayseason](#)

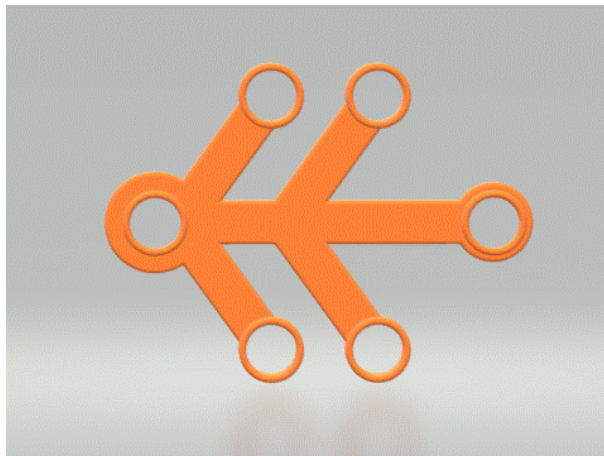
If you 3D print, you've probably played with LEGOs once or twice, maybe you're even a fan. You may even see the benefits of LEGO-based decoration. But if you're like me, you're stuck wishing for decorations that are larger than a few centimeters.

I've got some good news for you! I was inspired by @Fuganater's design for a LEGO wreath, but his design's size and proportions weren't quite what I needed. I built a new wreath design that is symmetrical and sticks closer to the proportions of the official LEGO piece. Each socket includes tapered teeth to help align each piece to the appropriate angles.



Pre-Print Instructions

All connections in the design have a slight interference fit. I found the 0.2mm tolerance works well to hold the branches together, but still having the option to separate them. The 0.3mm tolerance pieces will provide a looser fit. If you're not sure about the tolerances of your printer, try printing a pair of each model in the "Tolerance Test Pieces" model folder (0.2mm x2 and 0.3mm x2). I recommend printing the test parts at the same time to check the printer's accuracy in both X and Y dimensions. (I can provide other tolerances by request.)



Parts

- BRANCHES: Eight branches will yield a wreath approximately 53cm (21in) in diameter, and increasing or decreasing the number of branches (6 or 10) will give you a smaller or larger wreath.
- STUDS: Print as many studs as you'd like! (I found 1 stud per branch to look quite nice.) Please note the printing recommendations below!
- SPACER: Use the spacer to provide some space between the wreath and your door (it looks classier). The spacer has a flat back to make it easy to use double-sided tape, command strips, etc.

Every piece in the model is extremely forgiving to print. You won't need supports, all slopes are 45° or less, and the bridges are less than 10mm long.

Features

- Gentle interference fit
- Prints in ~3 hours (per branch, dependent on printer and settings).
- Uses ~57g filament (per branch).

Recommended Settings

- Walls: 3
- Infill: 15%+ using a high-strength pattern like gyroid or cubic
- Layer Height: 0.20mm or 0.28mm height
- Material: PETG recommended if exposed to sunlight, PLA or PLA+ for interior use
- Supports: No
- Brim: Studs only
- Change Orientation: No

Model files



0.2mm Tolerance

2 files



brick_wreath_stud_02mm.3mf

☐ 0.2mm tolerance (recommended)



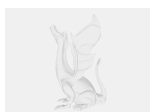
brick_wreath_branch_02mm.3mf

☐ 0.2mm tolerance (recommended)



0.3mm Tolerance

2 files



brick_wreath_stud_03mm.3mf

☐ 0.3mm tolerance (looser)



brick_wreath_branch_03mm.3mf

☐ 0.3mm tolerance (looser)



Tolerance Test Pieces

2 files



brick_wreath_test_02mm.3mf

☐ 0.2mm tolerance (recommended)



brick_wreath_test_03mm.3mf

☐ 0.3mm tolerance (looser)



brick_wreath_spacer.3mf

Print files



brick_wreath_branch_02mm_02mm_pla_mk3_4h1m.gcode

⚙️ PLA ⚙️ 0.40 mm ⚙️ 0.20 mm ⌚ 4.01 hrs ⚖️ 57 g 🖨️ Prusa MK3/S/S+

☐ 0.2mm tolerance (recommended)



brick_wreath_stud_02mm_02mm_pla_mk3_53m.gcode

⚙️ PLA ⚙️ 0.40 mm ⚙️ 0.20 mm ⌚ 0.88 hrs ⚖️ 9 g 🖨️ Prusa MK3/S/S+

☐ 0.2mm tolerance (recommended)



brick_wreath_spacer_02mm_pla_mk3_36m.gcode

⚙️ PLA ⚙️ 0.40 mm ⚙️ 0.20 mm ⌚ 0.60 hrs ⚖️ 10 g 🖨️ Prusa MK3/S/S+

License

This work is licensed under a
Creative Commons (4.0 International License)



Attribution-ShareAlike

- ✗ | Sharing without ATTRIBUTION
- ✓ | Remix Culture allowed
- ✓ | Commercial Use
- ✓ | Free Cultural Works
- ✓ | Meets Open Definition