

Geodesic Dome Light



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updated 10. 2. 2022 | published 10. 2. 2022

Summary

A printable geodesic dome light fixture made from 60 identical segments.

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Tags: [light](#) [lamp](#) [fixture](#)

So, I felt like making a stupid lamp and that's how it looks like. You could call it the coronavirus lamp or the minesweeper lamp or ... whatever?

Let's talk about this starting with geometrical structure: What I did use is a dodecahedron, which is a three-dimensional object made from 12 pentagons. All of these pentagons are identical and have equal side lengths.

When we subdivide each pentagon in 5 sections and extend their position from the center point of the **dodecahedron** to a sphere, then three sections from adjacent pentagons can be merged to a single segment. The nice thing now is that all of these resulting 60 segments are identical. That's pretty nifty, because now we just need make a single, small part 60 times and can assemble a full globe.

This is basically a model of one of the geodesic domes by **Bucky Fuller**, the **Fly's Eye Dome**. It's a geodesic dome with circular holes, made completely from segments, not from sticks and hubs like traditional geodesic domes.

It is clever to use a brim for the segments as they touch the buildplate only on a rather small area. Total printing time was about 96h hours. I got 30 low intensity lightbulbs from Ikea (socket type E14) and cheap standard light bulb fixtures from a noname brand. More info about the parts in the [blog post](#).

Or you can learn a bit more in the video where I ramble about geodesic domes in general:

Model files



socket.stl



top.stl



hook.stl



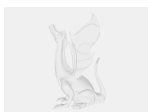
connector.stl



segment.stl



fixtureholder.stl



geodesiclight.step



geodesiclight.f3d

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