



Emergency Exit Light Test Button Poker



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Summary

Poker to press the test button on emergency exit light fixture



0.88 hrs



1 pcs



0.20 mm



0.40 mm



PET



4 g



Prusa
MK3/S/S+

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Tags: [light](#) [test](#) [button](#) [tools](#) [exit](#) [emergency](#)

Background:

The small business I work for owns a small building that has 18 emergency exit lights. Fire code requires these lights to have a battery backup that must be checked twice a year to verify the battery is in working order. Checking each light requires that I move a ladder around to 18 different places in the building.

A 4-foot long wood dowel rod and this print removed the need for the ladder (for me) - making the process of checking emergency lights much faster and easier.

Reference the included pictures for additional understanding of the intended use.

Design:

Designed in Metric to fit on the end of an imperial 7/16 inch (~11mm) diameter wood dowel rod.

Total print length: 52 mm

Cylinder/shaft length: 30 mm

Cylinder/shaft diameter: ~11 mm

Pokers: 12 mm

Cylinder walls: 3 mm

Print setup:

The .gcode and .3MF files have custom supports included so that the horizontal poker is supported but there are no supports in the cylinder/shaft where the dowel is inserted (supports are not needed in the interior shaft). I added the supports in PrusaSlicer by using "Supports: Everywhere" and then using a cylinder support blocker in the cylinder/shaft.

.20 mm Quality

15% infill (only used in the top 22mm of the print)

3 perimeters (shaft walls are just perimeters with no infill)

Detect thin walls (may not be needed)

No brim - printed on my MK3S+ without a need for a brim

PETG on Textured Sheet

Other factors and potential improvements:

The dowel rod I used is 7/16 x 48 inches (~11 mm x ~122 cm)

I intended to design this for a dowel rod with a diameter of 1/2 to 3/4 inches (~13 to 19 mm) to prevent flexing. The 7/16 dowel rod flexes when trying to poke buttons on the side of a light fixture. When I was buying dowel rods at my local hardware store, the 1/2 to 3/4 inch dowels were only available in length of 24-inch (~61 cm), much too short to be of use. 7/16 was the widest dowel I could buy in 48-inch length.

I stand 6-feet (~183 cm) tall and my vertical reach is approximately 92 inches (~233.5 cm)

The dowel rod and poker add 4-feet (~122 cm) to my vertical reach for a total of ~140 inches (355.5 cm).

YMMV for total vertical reach depending on your height and the length of the dowel rod used.

Model files








project_emergency-light-tester-rod-head-v3.3mf

☐ Includes manual supports for the outer overhang. No supports needed inside the cylinder.

Print files



project_emergency-light-tester-rod-head-v3_02mm.gcode

 PET  0.40 mm  0.20 mm  0.88 hrs  4 g  Prusa MK3/S/S+

☐ Includes manual supports for the outer overhang. No supports needed inside the cylinder.

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