



MUJI Drybox - with LED humidity indicator

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VIEW IN BROWSER

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Summary

Based on A4 storage box from .



4.47 hrs



3 pcs



0.20 mm



0.40 mm



PLA



29 g



Prusa
MK3S/S+ &
MMU2S

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Tags: **drybox**

Based on A4 storage box from .

<https://www.muji.com/jp/ja/store/cmdty/detail/4550002555702>

Each box contains a digital pressure/temperature/moisture meter (BME280), an RGB LED (PL9823), and a DB9 connector for a straight-rs232 cable.

Sensor can be bought on Amazon.

LEDs in Akidzuki Denshi (in akihabara).

Cheap DB9 cables and connectors in Marutsu (also akihabara).

Connection box, mounted at the back of the printer, allows connecting up to 8 boxes to a Raspberry PI (e.g. the octopi driving your printer).

I used cables instead of wireless connection to avoid having to replace batteries every few months.

The boxes are **not** easy to open and close. You'll likely have to seal them with transparent tape, too. And the top covers are likely to fracture during closing. Basically, those top covers suck. I can't really recommend using them. If you have any other idea how to seal those boxes - go for it, and share.

Software for driving the LEDs from raspi is available here:

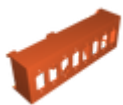
<https://gitlab.com/yunta/pl9823> - LEDs control tool

<https://gitlab.com/yunta/dry-box-example> - example script to color leds based on humidity

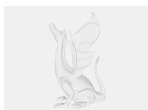
Print instructions

I did not upload any gcode for the top covers, because every box is slightly different. Measure walls' thickness with a caliper, or something, and update the openscad files **separately for every box you bought**. Then slice as you like it. Supports are only needed for the "base" and "plug-box" parts (or maybe not, I haven't tried printing them without supports). Infill is irrelevant, I think.

Model files



plug-box-8-angular-supports.stl



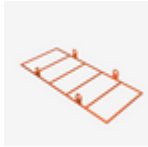
plug-box-8-angular-supports.fcstd



filament-box-2-pin-1.stl



filament-box-2-pin-1.scad



filament-box-2-base-3.stl



filament-box-2-base-3.scad

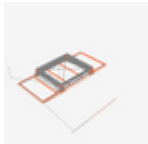


filament-box-2-cylinder-1.stl



filament-box-2-cylinder-1.scad

Print files



filament-box-2-base-3_02mm_pla_mk3smmu2s_1h11m.gcode

⚙ PLA ⚙ 0.40 mm ⚙ 0.20 mm ⌚ 1.19 hrs ⚖ 7 g

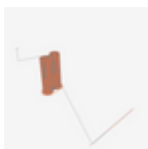
🖨 Prusa MK3S/S+ & MMU2S



filament-box-2-pin-1_02mm_pla_mk3smmu2s_1h0m.gcode

⚙ PLA ⚙ 0.40 mm ⚙ 0.20 mm ⌚ 1.00 hrs ⚖ 6 g

🖨 Prusa MK3S/S+ & MMU2S



filament-box-2-cylinder-1_02mm_pla_mk3smmu2s_2h.gcode

⚙ PLA ⚙ 0.40 mm ⚙ 0.20 mm ⌚ 2.28 hrs ⚖ 16 g

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