



LED Lightbar Holder for Prusa i3 Under-MMU mounting.

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[VIEW IN BROWSER](#)

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Summary

An LED light bar holder which fits under the MMU unit by clamping onto the underside of its two lower (horizontal)...



2.79 hrs



4 pcs



0.20 mm



0.40 mm



PLA



34 g



Prusa
MK3/S/S+

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Tags: [led](#) [ledmount](#) [ledstrip](#) [3dprinterlighting](#) [ledholder](#)
[ledlight](#) [ledlighting](#)

An LED light bar holder which fits under the MMU unit by clamping onto the underside of its two lower (horizontal) supports.

Because it sits just behind the top frame gantry, there is little light shining into one's eyes (unless the printer's high up on a shelf!), but it still provides a good broad spread of illumination around the build plate.

This design can be reapplied to suit other purposes too, the LED strip holder likely then being the part mostly used.

Print Settings

Printer Brand:

Prusa

Printer:

i3 MK3

Rafts:

Doesn't Matter

Supports:

Doesn't Matter

Resolution:

0.2mm Quality

Infill:

15%

Filament:

[

Generic PLA](<http://www.amazon.com/s?url=search-alias&field-keywords=Generic+PLA&tag=thingiverse09-20>) Black, orange or colour to suit.

Notes:

Using brims by default, saving on filament (& the environment!) as opposed to using a raft.

Post-Printing

Piecing it together...

Using 3x M3 x 20mm countersunk machine screws, place the screws with their heads through the LED side of the LED mounting bar. Using the LED strip, <https://www.ebay.co.uk/itm/2-4-6X12V-LED-Car-Interior-White-Strip-Lights-Bar-Lamp-Car-Van-Caravan-Boat-Home/223067435724>, slide the LED strip itself out of the thin black bezel surrounding it, to prepare it for fixing to the holder - and taking care with its power leads at the board end to avoid breaking the soldered joints. Attach the bare LED strip (if possible with power lead still attached) to the inside of the recess in the lower section, with an 8 or 9mm wide x 170mm long strip of clear gel tape, e.g. <https://www.ebay.co.uk/itm/Double-sided-Clear-Transparent-Acrylic-Gel-Foam-Adhesive-Tape-8-10-15-25mm-S911/401655663511>. (This will also hold the M3 machine screws in place.) The LED strip does get warm when left on for extended periods, but the gel tape is made to be heat resistant (the glue on plain sticky foam pads is not capable for this job). A small amount of either hot or flexible glue can be placed onto the end of the strip where it exits the LED mount, to help reinforce the power lead solder connections while moving things around & fitting it all into place. Then, place the middle section onto the 3x M3 machine screws and press the two printed sections together. Lastly, fit the 2 recesses on top of the middle section onto the two lower struts of the MMU unit and fit the remaining top section through the MMU support frame and onto the M3 screws. Finally, using a set of 3x washers/ spring washers and either nyloc or plain hex nuts, secure the whole LED strip holder in place. There is a groove in one end of the LED frame to allow neat routing of the 12v power lead to its supply and it may be a good idea to fit a section of heat-shrink tubing to this end to cover the power lead ends where they're soldered to the LED strip, adding some strain relief to the lead terminals as well. And there you have it!

Pre-Installation arrangement. Note the c/sunk screws held in place behind the LED strip.

Installed Lightbar, with heatshrink tubing added (Light intensity reduced to aid photo).

How I Designed This

Born of necessity...

After acquiring the MMU unit, I've had to relocate the LED strip as the MMU supports prevented use of the gantry's 6mm width for supporting it. With the best place for mounting the LED strip still being somewhere around the top of the printer, the underside of the MMU unit close to the gantry seemed the best place, as this allowed the light source to be centered over the middle travel area of the heatbed. It was then a simple method of centering (in CAD) the two mounting grooves in the LED strip holder to the two underside supports of the MMU unit.

Category: 3D Printer Accessories

Model files



led_lightbar_holder_-_led_frame_holder_top.stl



led_lightbar_holder_-_led_frame.stl



led_lightbar_holder_-_build_plate.stl



led_lightbar_holder_-_led_frame_holder.stl

Print files



led_lightbar_holder_-_led_frame_holder_02mm_pla.gcode

⚙️ PLA ⚙️ 0.40 mm ⚙️ 0.20 mm ⌚ 1.01 hrs ⚖️ 12 g 🖨️ Prusa MK3/S/S+



led_lightbar_holder_-_led_frame_holder_top_02mm.gcode

PLA 0.40 mm 0.20 mm 0.78 hrs 9 g Prusa MK3/S/S+



led_lightbar_holder_-_led_frame_02mm_pla_mk3_1h.gcode

PLA 0.40 mm 0.20 mm 1.02 hrs 12 g Prusa MK3/S/S+



led_lightbar_holder_-_build_plate_02mm_pla_mk3_.gcode

PLA 0.40 mm 0.20 mm 2.79 hrs 34 g Prusa MK3/S/S+

[Find source .stl files on Thingiverse.com](#)

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