

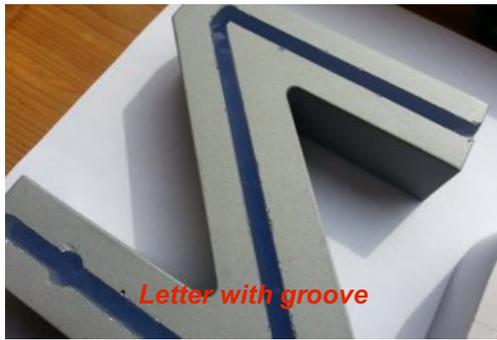


LED Illuminated Solid Acrylic Letters

This is a short instructive flyer to explain how to use the LETROLED Mini LED modules to manufacture an illuminated acrylic letter.

What you will need:

- NP Lighting Mini LED Modules for fully potted channel letters
- LED Power Supply (LED-MW-IP-60W12)
- Acrylic Letter to be illuminated
- Casting Resin (WEPURAN by <http://www.peters.de/us/products/casting-compounds/249-casting-resins-transparent/wepuran-casting-resins-on-polyurethane-resin-basis-pur>)



You need to mill a groove into the acrylic letter where the LED modules are to be placed. The groove needs to be about 5mm (0.2 inches) deep for the LEDs to fit

Though this might sound slightly counter-intuitive the LED modules need to be placed within the groove pointing to the back of the letter in order to illuminate the front of the letter.

Once the LEDs have been placed in the groove and a connection has been made to the power supply or the next letter, the resin is poured. The letters will then need 3 coats of paint to guarantee an even illumination:

- 1. The first coat of paint needs to be a matt white. It will need to cover the full area that is not to be illuminated (sides and back).*
- 2. The second coat of paint needs to be black and goes on top of the white coat. It prevents light from seeping out and makes sure all the light is reflected inwards.*
- 3. The final coat of paint will then be in the color the letter is to be (in the above example this is silver)*

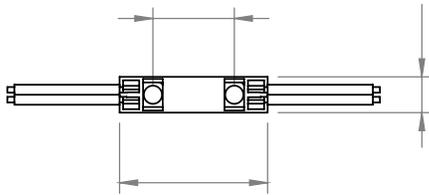
If you wish to create a "halo" effect the process remains the same apart from two things:

- 1. The LED string is placed within the groove pointing towards the side of the letter.*
- 2. The letter is not painted on the back side so that light can come out.*

The front of the letter needs to be fit with a thin sheet of colored acrylic or colored transparent vinyl in order to create the color of the light.

Please keep in Mind:

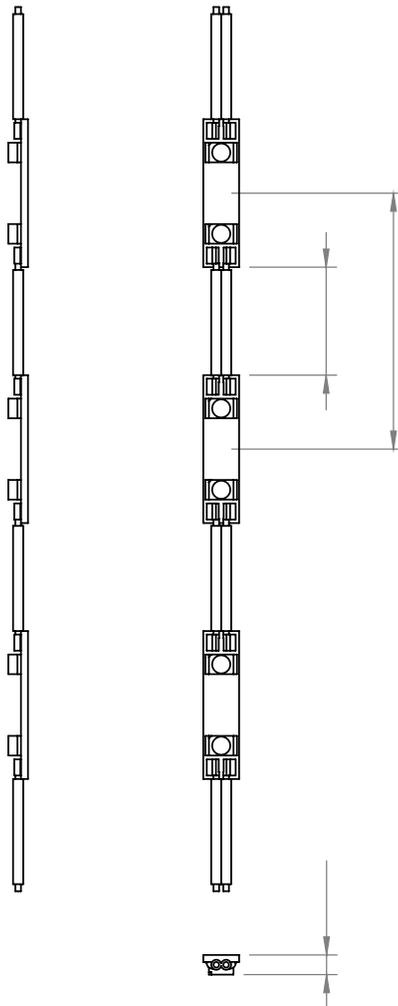
- a. *The maximum length of an LED module chain is 50 modules*
- b. *A 60W/12VDC Power Supply can run up to 229 LEDs (5 branches of 45 LEDs)*
- c. *Depending on the size of the letter, the font of the letter, and the diffusion properties of the acrylic used it might be necessary to mill a second (or third) raceway for additional LEDs. There are no clear cut rules for this and you have to determine this during production.*



Dimensions in the drawing to the left are in millimeters.

An updated drawing will become available shortly.

If you have any questions concerning our products please do not hesitate to contact us!



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