

How to build a light box

Light is what brings [Max Zorns tape art](#) to life. Like the effect of stained glass windows, light filters through the many layers of tape, creating a visual image. Any kind of lighting can work: sunlight, candles, light bulbs, LED lighting and light boxes. But the bottom line is: there is a big difference between a tape artwork that's illuminated and one that isn't.



Outside, street lamps and other urban lighting are perfect display frames. But to display inside Max Zorn has developed a few different solutions, preferably self-made frames as boxes with integrated LED lights.

Max offers these light frames at cost price, which lies between 50€ - 200€, depending on the size. Because we build quite a number of these frames every month, Max can offer this as a cheaper compared to buying the material yourself and building it from scratch.

If you rather build such a frame yourself, please read the tips below. Max is also always thankful for clever tips from your side to improve the frames, and welcomes any questions you might have along the way.

Contact: info@maxzorn.com

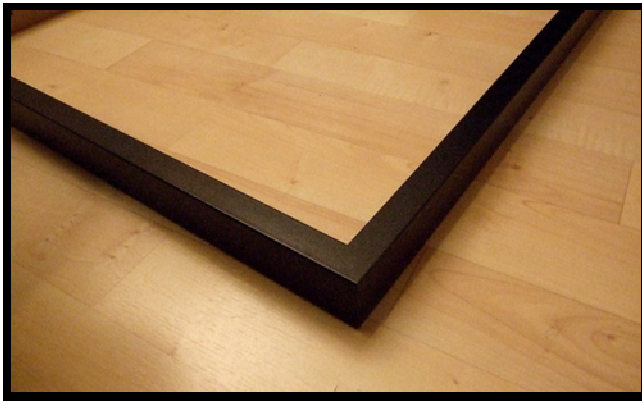
Please notice that the following construction guidance is only meant as an advice and not an official manual. In particular, because there are eventually electronic components involved – please read the instructions that come separately with these components carefully and consult an expert if you are not certain about their proper handling.

The material you need

Frame:

Max usually uses Ikea frames ("Ribba" series). They are globally available and come in different sizes. (Sometimes you have to cut and reattach the frame according to the specific artworks size.)

- **Costs: €10 – 26**, depending on size.



LED-Strip:

In order to have enough lighting power, Max uses an 5 meter LED-strip for an artwork with a size of 50 x 70 cm (19,7 x 27,6 inch). LED-light has the advantage of displaying at a low voltage (usually 12 VDC), not heating up too much, and saving energy. For more info please contact the producers. And whenever you work with electric devices like these please follow the safety instructions you receive from your retailer.

- **Costs: €30 – 80** for a 5 meter strip.
- **Tip 1:** Look on Ebay instead of electronic stores. The price difference is immense.
- **Tip 2:** Use *warm*-white LED's with 60 LEDs per meter.



Adapter:

You will need an adapter to connect the LED's to the electricity network. Usually that can be ordered together with the LED-strip.

- **Costs: €5 – 20**



Back sheet:

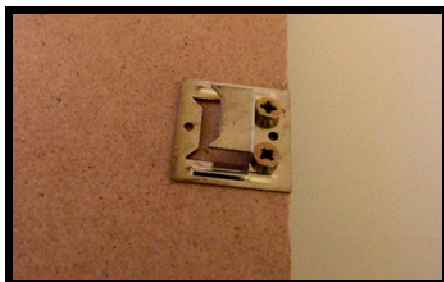
This will be the back part of the artwork on which the LED and the frame will be mounted.



- **Costs: €5 – 10**
- **Tip 1:** Use wooden fiberboard that is 3 mm thick. It is inexpensive and relatively easy to cut.
- **Tip 2:** These sheets often come in large formats. Ask at your hardware store to cut the piece into the right size for you.

Hanging System:

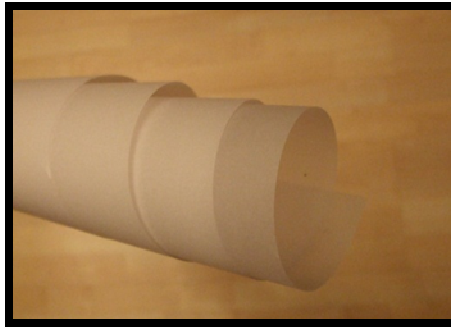
- **Costs: €2 – 10**



Protecting (acrylic-) glass:

In order to protect the artwork from damage and UV-light you might want to sandwich it between sheets of acrylic glass.

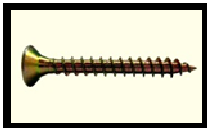
- **Costs: €10 per sheet**
- **Tip 1:** Use milky acrylic glass for the back part. That disperses the light and ensures an even illumination.
- **Tip 2:** Alternatively (or in addition) you might want to use a milky transparent paper to disperse the light even more effectively



The Tools you need

Screwdriver (or power drill)

Screws (e.g. 3,0 x 15 mm)



Carpet knife

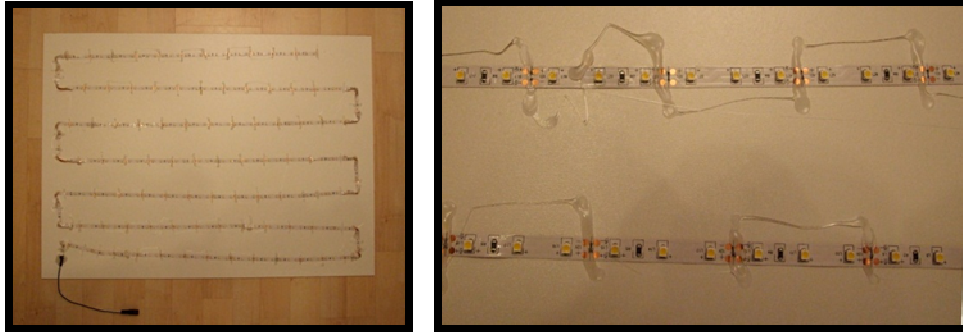
Gluegun & Glue (optional)

Hammer (optional)

How to build the light box

Step 1: Back sheet

- Cut the fiberboard until it fits the frame.
- Fix the LED-strip on this board. Usually these strips stick on the surface. However, to make sure that the strip sticks properly double-fix it with a glue gun.



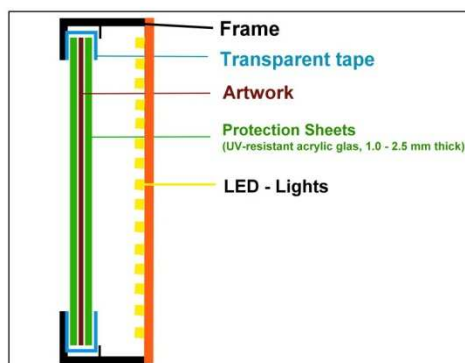
Step 2: Frame

- Carve a small hole in the frame to give room for the cable.



Step 3: Put Artwork into place

Start with the protecting glass, continue with the artwork and sandwich it with the (milky) acrylic glass. Fix the sheets like the diagram below:



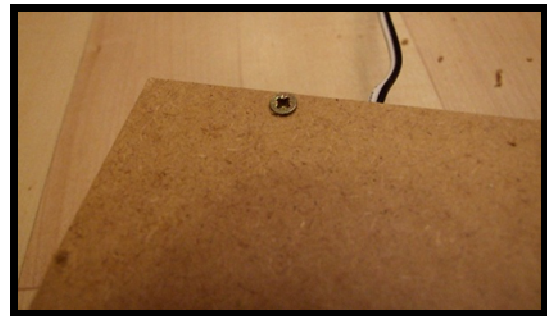
Optional:

In order strengthen this construction you might want to staple or screw thin ledges onto the frames inside.



Step 4: Fixing the backsheet:

Now screw the back sheet on the frame and fix the hanging system as you prefer. Whatever system you use – the best way is to have it attached to the back sheet *and* the frame.



If everything worked out your light frame should look similar to this:

