HARDWIRED LED LIGHTED SHELVES INSTALLATION

Our handcrafted LED floating shelves combine premium hardwood construction with high-quality lighting components to bring both function and style to your space.

Key Features

- Handcrafted Quality – Made in-house from precision CNC-milled, hand-finished hardwoods, available in a variety of finishes and wood types.
- Safe & Certified – Built with UL and ETL Listed components.
- LED Channel – Aluminum channel dissipates heat and includes a no-spot lens, ensuring smooth, even lighting without visible diodes.
- Long-Lasting – 50,000-hour lifetime rating.
- Bright & Efficient – 240 lumens per foot at only 3 watts per linear foot.
- Dimmable – Works with a dimmable 24V power supply/transformer (sold separately).

Power Requirements

- Input Voltage: 24V DC required
- Power Consumption: 3 watts per linear foot (be sure to size transformer accordingly)
- Power Supply: Required but not included — available on our website:
- jthomashome.com/collections/led-lit-floating-shelf-accessories

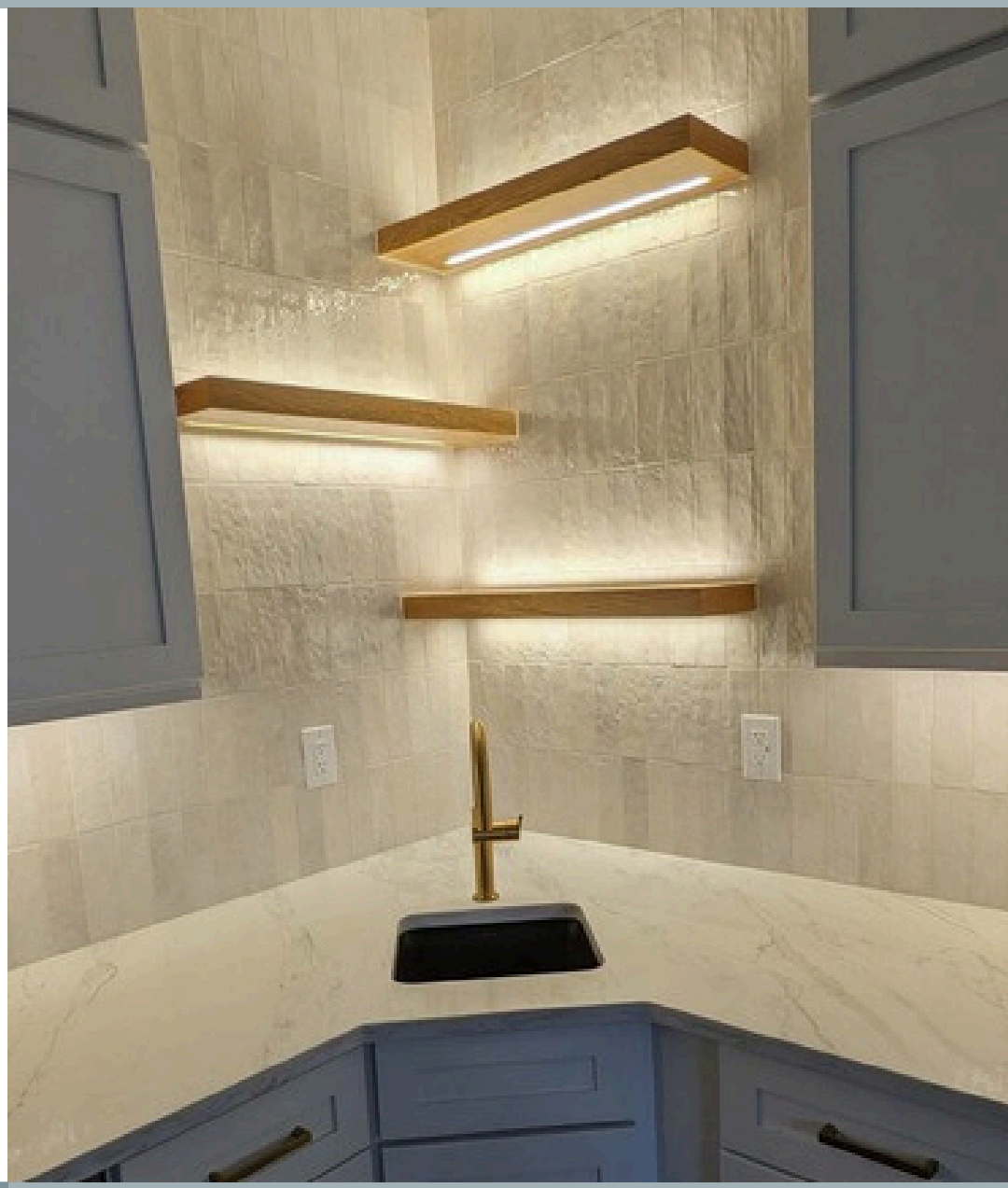
Installation Notes

- The light channel ships separately to allow installation with wiring exiting either the left or right side of the rear of the shelf.
- If you need a custom size or setup, we're happy to help — just let us know.

Safety Warnings

⚠️ Bracket Installation: All brackets must be installed correctly to avoid sagging shelves, falling objects, or injury.

⚠️ Electrical Installation: Shelving units must be wired to power, controlled by a switch, and installed by a certified electrician. Failure to do so may result in injury.



Pro Tip:

For the cleanest look, plan your wiring route before installing the shelves. Running low-voltage wire through wall cavities or cabinetry keeps your setup hidden and professional.

Have some questions?

Get help from a pro, email us at customerservice@jthomashome.com
OR CALL US AT 913.353.4283
Monday - Friday 7 a.m. - 3:30 p.m. CST

HARDWIRED LIGHTED SHELVES SPECIFICATIONS

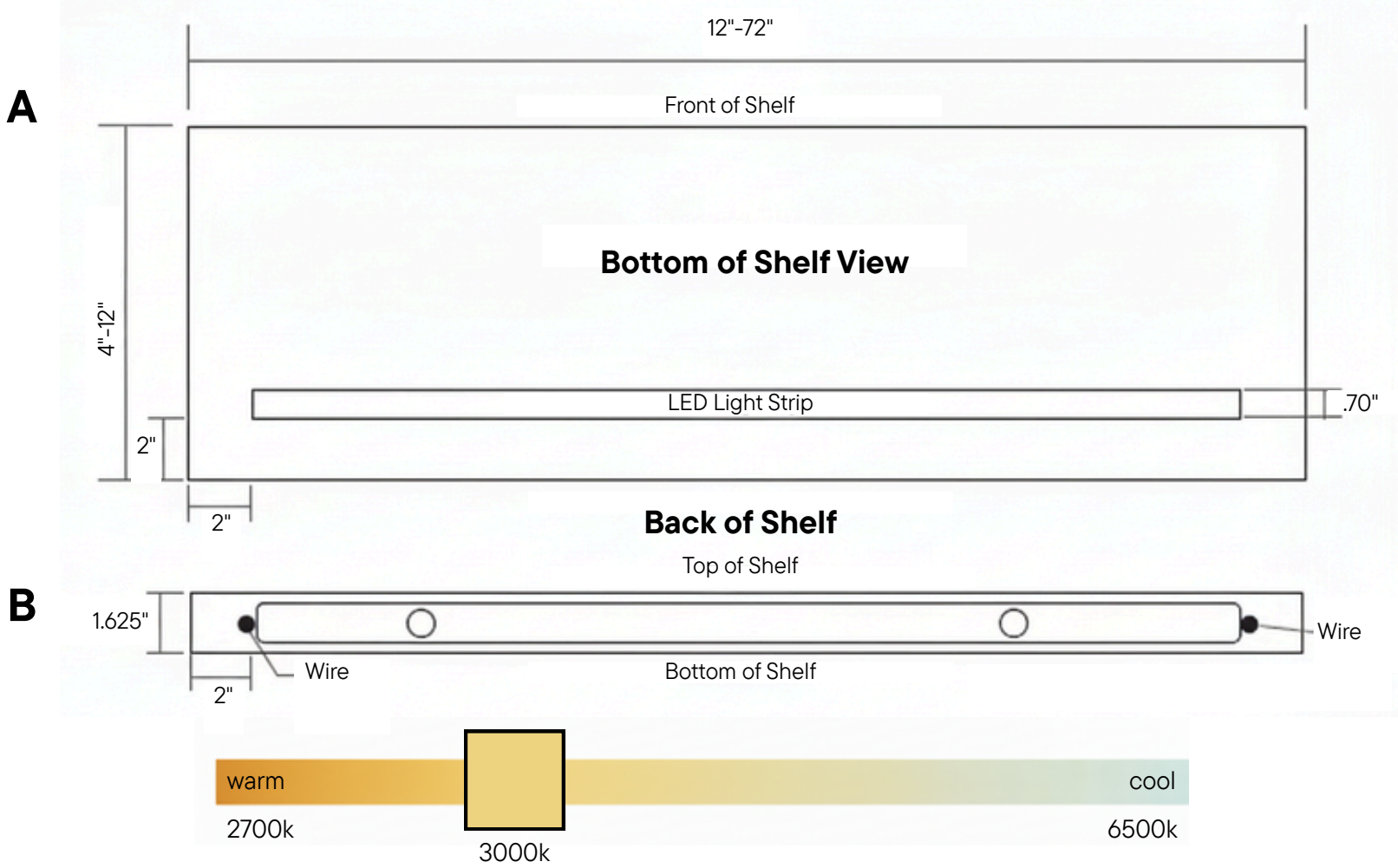


Image	Light Position	Load (lbs.)	Shelf Length	Shelf Thickness	Wire Location	LED Color Temp	Watts per ft
A	2" in from back	30-100lbs	12" - 72"	1.625"	NA	3000k Warm	3
B	NA	30-100lbs	12"-72"	1.625"	2" in on Right or Left Side	3000k Warm	3

QUICK TRANSFORMER GUIDE

INSTALLING YOUR LED SHELVES WITH TRANSFORMERS

1. Shelf Leads
   - Each shelf has a lead coming out of the back, 2 inches from either the left or right side.
   - This lead connects to low-voltage wire (18/2 in-wall rated), which then runs to the 24-volt transformer that powers the shelves.
   - 18/2 wire has two conductors: red (positive) and black (negative). Be sure to keep polarity consistent from the shelf lead to the transformer.
2. Wiring Method
   - Run a separate low-voltage wire from each shelf to the transformer.
   - Always wire in parallel, not series.
     - Parallel = consistent brightness across all shelves.
     - Series = voltage drop, with shelves at the end appearing dimmer.
3. Transformer Placement
   - Place the transformer somewhere hidden but accessible for servicing.
   - Common locations: inside a base cabinet, attic, basement, closet, or garage.
   - If shelves are already stubbed out with high voltage (120V), a transformer can be placed inside the cavity of a 3" shelf — but this requires one transformer per shelf.
4. Calculating Transformer Size
   - LED shelves use 3 watts per linear foot of lighting.
     - Example: a 36" shelf uses about 9 watts.
   - Always allow for a 10% safety factor.
     - Example: if your shelves total 46 watts, size up to a 60-watt transformer.
   - One transformer can power multiple shelves, as long as you can chase all wires back to one location.
     - Example: In a kitchen, wires can run down the wall cavity into base cabinets and back to one transformer.
     - If shelves are separated (e.g., on both sides of a fireplace) and wires can't be routed together, you'll need separate transformers.
   - If your shelves have both up and down lighting, be sure to count both lengths when calculating total wattage.
5. Transformer Options

We offer several transformer sizes, and while their appearance may vary, they all function the same for the installation methods shown in this guide:

- 25, 50, and 60 watt → White housing, input and output on opposite sides.
- 96, 120, and 150 watt → Black housing, input and output on the same side.
  - 120W and 150W transformers include an additional pink and purple wire, which are not used in the setups shown here.

MAXIMUM LED LIGHTING LENGTH SUPPORTED	RECOMMENDED TRANSFORMER	APPROXIMATE DIMENSIONS
UP TO 7.6 LF	25 WATT	2 1/2" X 7" X 1"
UP TO 15.2 LF	50 WATT	2 1/2" X 7" X 1"
UP TO 18.2 LF	60 WATT	2 1/2" X 7 1/4" X 1 1/2"
UP TO 29.1 LF	96 WATT	3" X 7" X 1 1/2"
UP TO 36.4 LF	120 WATT	4" X 10" X 2"
UP TO 45.5 LF	150 WATT	4" X 10" X 2"
UP TO 58 LF	192 WATT	4 1/4" X 11" X 2"
OVER 58 LF	CONTACT US FOR LARGER SIZES	VARIES

Transformer Note:

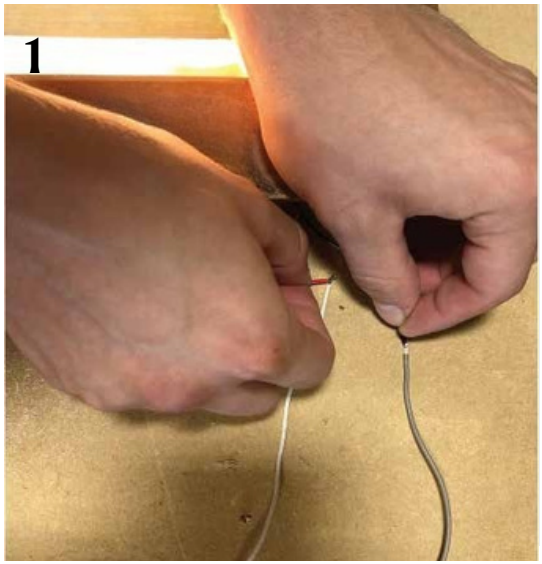
While other transformer brands may function with our LED shelves, we cannot guarantee compatibility or provide efficient troubleshooting support if issues occur. For best results, we recommend using our 24-volt dimmable transformers, which are designed and tested to work seamlessly with our products. Our transformers have a one year warranty against manufacturer's defects.

HARDWIRED LED LIGHTING – INSTALLING THE LIGHTING KIT

Close up of lighting kit
(Metal Channel, LED Light Strip and Lens Cover)

Our LED light kits ship uninstalled, with holes pre-drilled about 2 inches from the back on both sides so you can choose the best exit point for your wires. Always test the light strips before installation. This requires the transformer to be properly installed and connected first.

⚠️ CAUTION: Connect to a compatible switch-controlled power source; installation by a certified electrician is recommended.



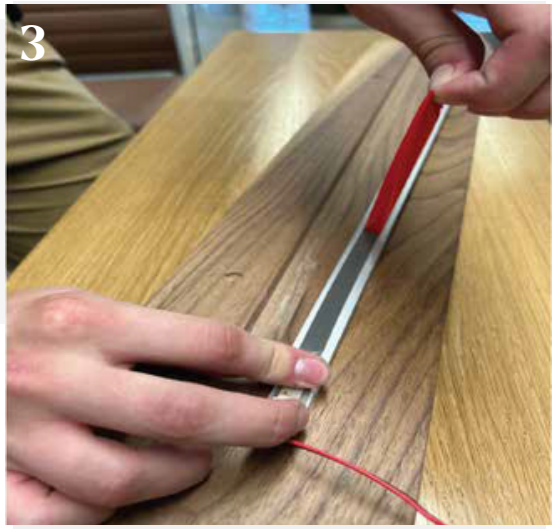
Test the Light Strip

Every light strip is tested before shipping, but connections may loosen during shipping or installation. To test, connect the transformer to a power source. Touch the red wire to the positive terminal and the black wire to the negative terminal. The strip should light up if it is working properly.

Important: Use caution with live wires. Avoid touching exposed metal ends, and only test in a safe, dry environment.

Clean the Groove

Before installing the LED light kit, thoroughly wipe out the groove in the shelf where the kit will be placed. Make sure the surface is free of dirt, dust, debris, and oils. A clean surface is essential for proper adhesion—any residue can prevent the adhesive strips from sticking securely, causing the lighting kit to loosen or fall out of place.



Remove Adhesive Backing

The lighting kit includes a metal channel on its underside with an adhesive strip already attached. Carefully peel off the plastic protective cover to expose the adhesive.

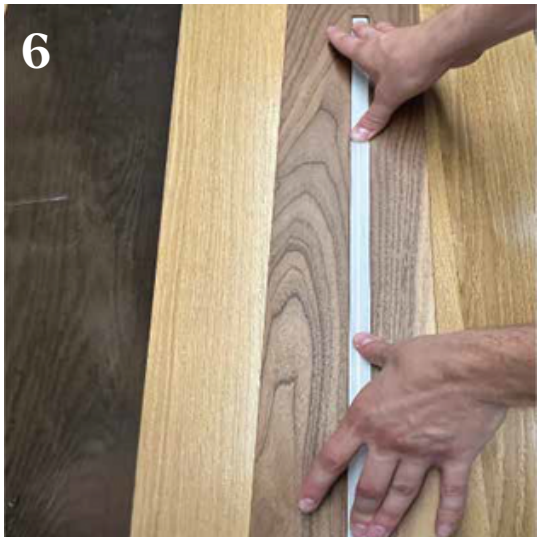
Tip: Avoid touching the adhesive surface to ensure maximum bonding strength.

Position and Insert the Lighting Kit

Decide which side you want the LED strip wires to exit from the back of the shelf. With the adhesive side (metal channel) facing the groove, insert the lighting kit at a slight angle, starting on the opposite end from the wired side. Do not press it down yet—you'll secure it after fishing the wires through the hole in the next step.

Fish Wires Through the Hole

Carefully guide the LED strip wires through the hole at the back of the shelf. Tuck any excess length of the light strip neatly into the groove so it sits flush and out of sight.



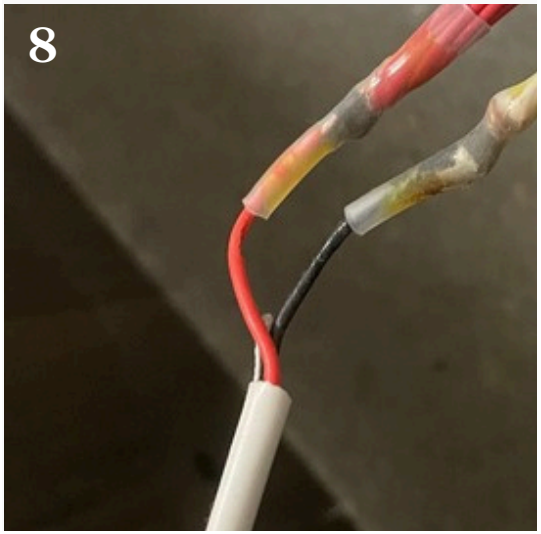
Secure the Lighting Kit

Once the light strip and wires are in place, press the lighting kit firmly into the groove for at least 30 seconds to ensure a strong bond.

Important: For best results, apply the adhesive at a temperature between 70°F and 100°F (21°C–38°C). The adhesive requires 24–72 hours to fully cure. Avoid putting stress on the lighting kit during this time.

Trim and Install the Lens

For the best fit, trim the lens (white plastic cover) to size using scissors. If you need to reinstall the lens into the channel, start at one end and work your way down the length of the channel, pressing it gently into place.



Install Shelf and Connect Electrical

Slide the shelf onto the brackets (which should already be securely mounted to the wall). Once the shelf is in place, connect the wires from the lighting kit to the 18/2 LED cable:

- Match (+) positive to positive
- Match (-) negative to negative

Be sure the connections are secure and protected before powering on the system.

Lens Cover (Diffuser)

Note: The lens cover (diffuser) is supplied slightly longer than the shelf so you can trim it to your exact length.

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Common Transformer Installation Setups

This guide outlines common installation methods for the Dimmable LED Driver (available in multiple wattages). This driver is designed for use with standard on/off switching, compatible TRIAC dimmers (Forward Phase Dimmer: For optimal AC dimming performance, please use a forward phase CL-style or equivalent dimmer. The use of revers phase of ELV may degrade dimming performance. Compatible with Forward phase, Magnetic low voltage, TRIAC Dimers.), and optional smart control setups. These configurations allow you to choose between simple control with a wall switch, dimming with a traditional wall dimmer, or wireless/smart home integration.

Important Safety Note: This transformer operates on 120V AC line voltage. For safety and to ensure code compliance, it is strongly recommended that all electrical connections — especially those on the AC input side — be installed by a licensed electrician.

While this guide covers the most common installation setups we see, there are other possible configurations. If you plan a different setup, consult your electrician or the device manufacturer to ensure compatibility and safe installation.

On/Off Switch Setup

Input: The transformer's 120V AC input wires (black and white) are connected to a standard on/off switch or plugged into a standard wall outlet. The green wire is connected to ground.
Output: The transformer's 24V DC output wires (V+ and V-) are connected directly to the LED strip's input.
Control: The wall switch or outlet turns the entire system (transformer and lights) on or off.

Hardwired TRIAC Dimmer Setup

Input: The transformer's 120V AC input wires (black and white) are hardwired to a compatible TRIAC dimmer switch. The green wire is connected to ground.
The output of the dimmer is then wired to the transformer's AC input. The DC output wires (V+ and V-) from the transformer are connected directly to the LED strips on the floating shelves.
Control: The wall dimmer controls the power to the transformer, which in turn dims the lights from 0-100%.

Wireless Switch Setup (Optional: Smart Home Setup)

Smart AC Switch: A smart dimmer switch is installed on the 120V AC input side of the transformer. The switch communicates with your smart home app or hub to control the power and dimming, just like a hardwired TRIAC dimmer.
Low-Voltage DC Receiver: The transformer is plugged into a standard outlet. A smart receiver (like the 'Smart Wav Receiver') or a wireless controller is installed on the 24V DC output side, between the transformer and the LED strips. This device receives a signal from a wireless switch, remote, or app and controls the brightness of the LED strips.

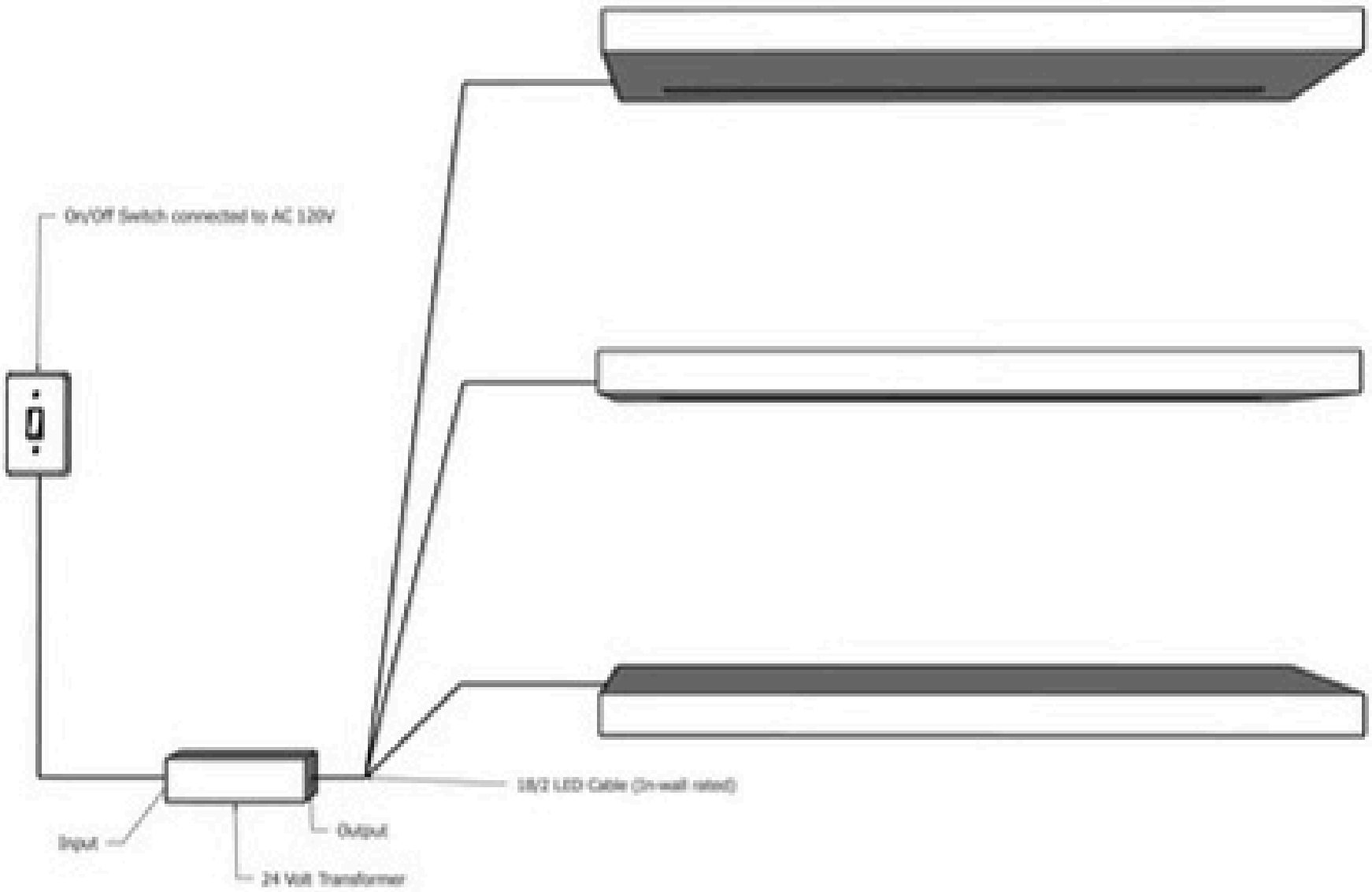
Purchase from J Thomas Home:

- 24V Dimmable Transformer (correct wattage for your installation)
- Wav Smart Receiver
- Wireless Switch (1 Zone for setup shown in diagram above)
- 18/2 Low Voltage LED Cable

Optional Smart Home Setup:

- Zigbee or Z Wave Compatible smart home device for integration.
- If your smart system is not Zigbee or Z Wave, you may need a hub or bridge compatible with your platform (Wi-Fi, Z-Wave, etc.).
- The Wav Smart Receiver will still work with its included wireless remote without any smart home hub. Refer to your smart home device documentation for setup.

COMMON TRANSFORMER INSTALLATIONS | ON / OFF SWITCH SETUP



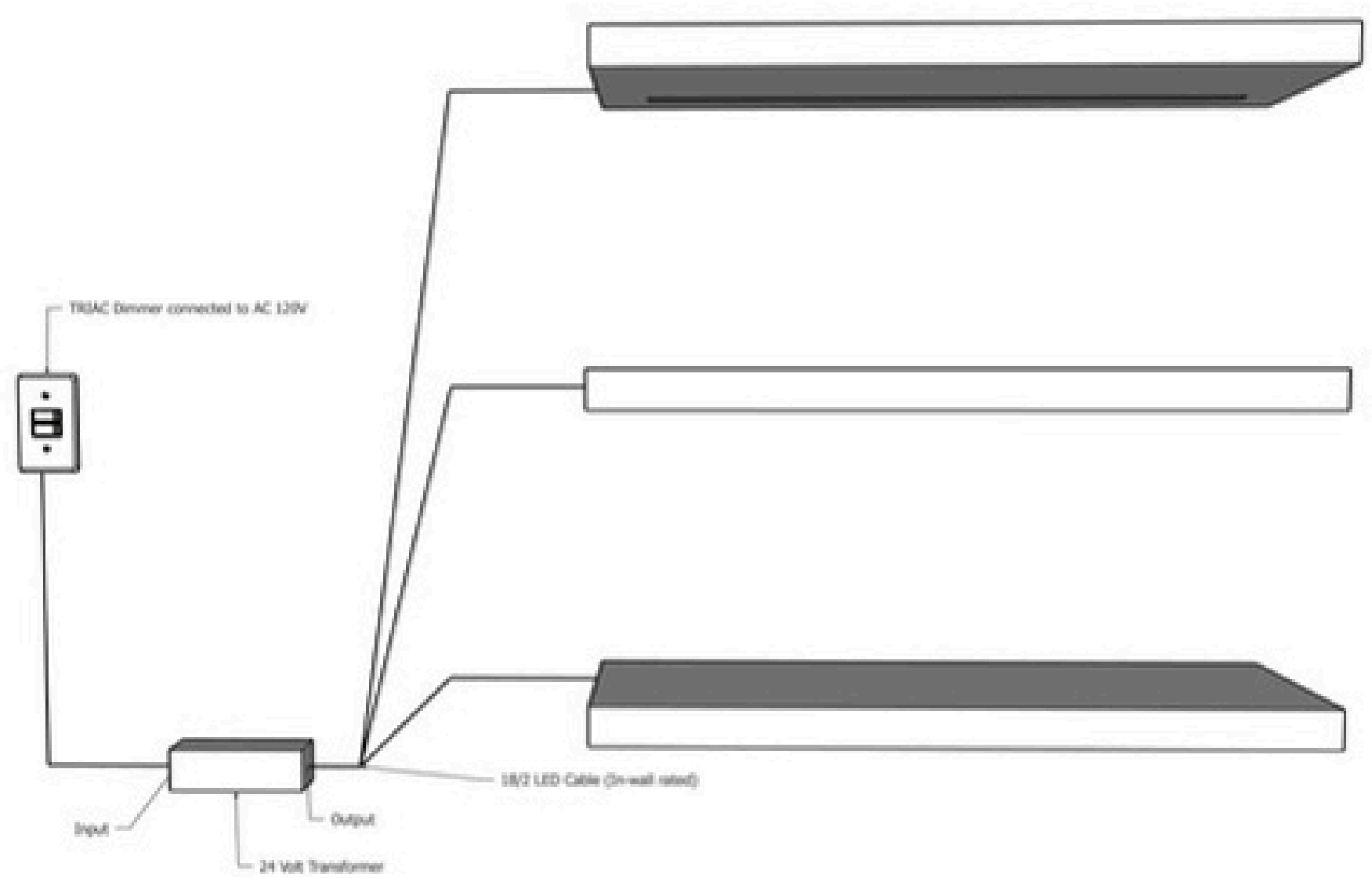
Purchase from J Thomas Home:

- 24V Dimmable Transformer (correct wattage for your installation)
- 18/2 Low Voltage LED Cable

Additional Items Needed:

- Standard single-pole wall switch
- Follow the manufacturer's instructions for installation and purchase any additional materials they specify (junction box, wire nuts, etc.).

COMMON TRANSFORMER INSTALLATIONS | HARDWIRED TRIAC DIMMER SETUP



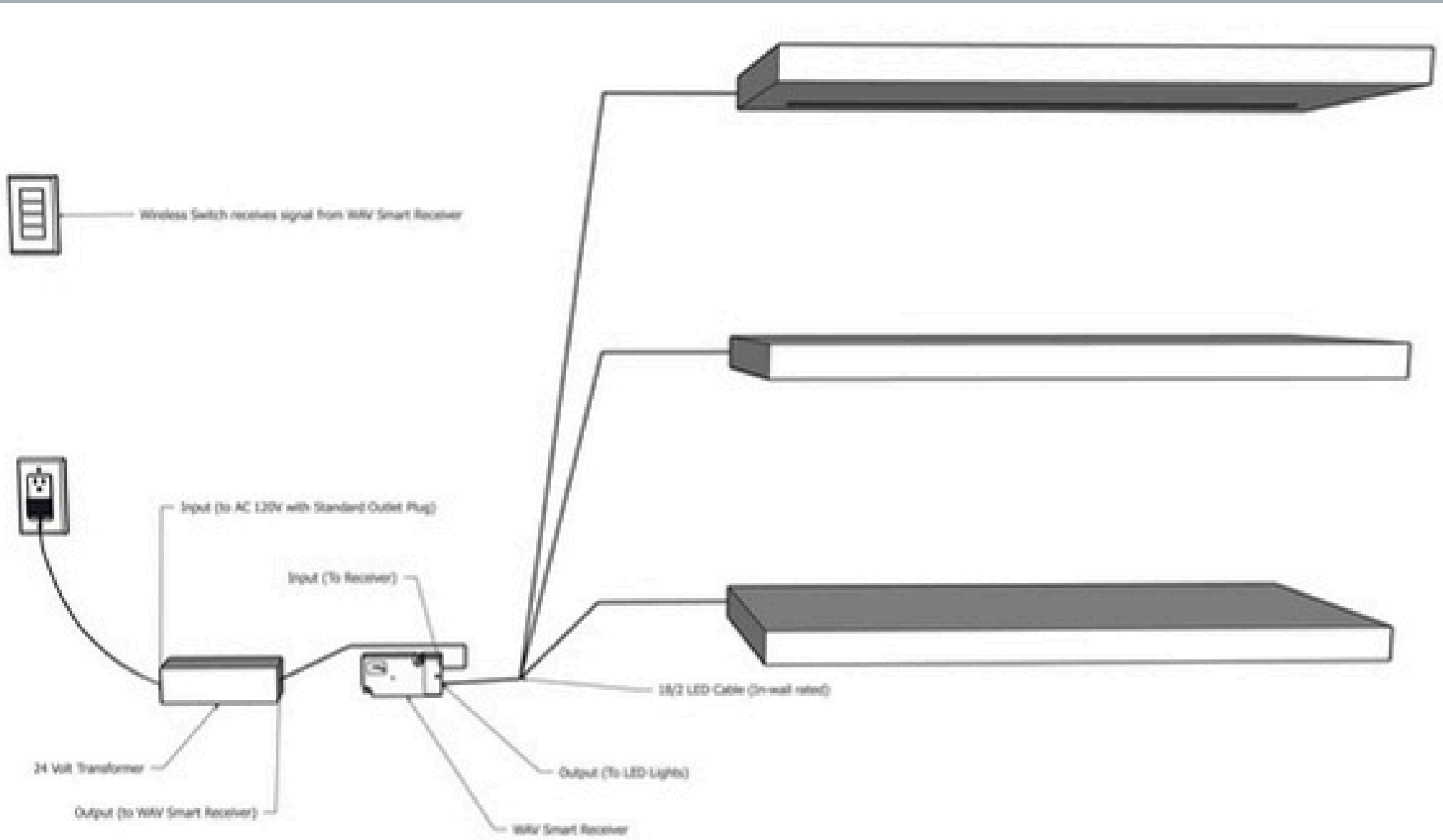
Purchase from J Thomas Home:

- 24V Dimmable Transformer (correct wattage for your installation)
- 18/2 Low Voltage LED Cable

Additional Items Needed:

- Compatible TRIAC Dimmer (brands include Lutron, Leviton, Legrand, Cooper AH)
- Follow the manufacturer's instructions for installation and purchase any additional materials they specify.

COMMON TRANSFORMER INSTALLATIONS | WIRELESS SWITCH | SMART HOME SETUP



Purchase from J Thomas Home:

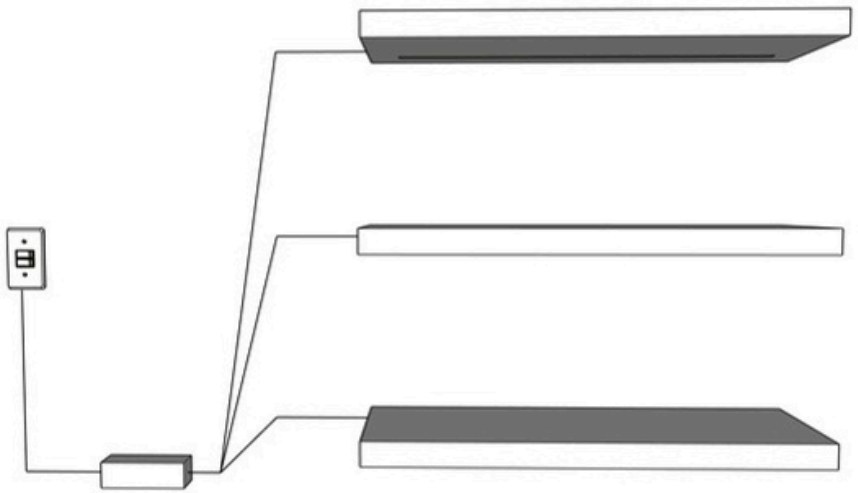
- 24V Dimmable Transformer (correct wattage for your installation)
- Wav Smart Receiver
- Wireless Switch (1 Zone for setup shown in diagram above)
- 18/2 Low Voltage LED Cable

Optional Smart Home Setup:

- Zigbee-enabled smart home device for integration.
- If your smart system is not Zigbee, you may need a hub or bridge compatible with your platform (Wi-Fi, Z-Wave, etc.).
- The Wav Smart Receiver will still work with its included wireless remote without any smart home hub. Refer to your smart home device documentation for setup.

WIRING LED SHELVES: PARALLEL VS. SERIES

✅ PARALLEL WIRING (HOMERUN METHOD)



PARALLEL WIRING (HOMERUN METHOD) ✅ RECOMMENDED

Each shelf is wired directly back to the transformer, so every shelf gets full voltage.

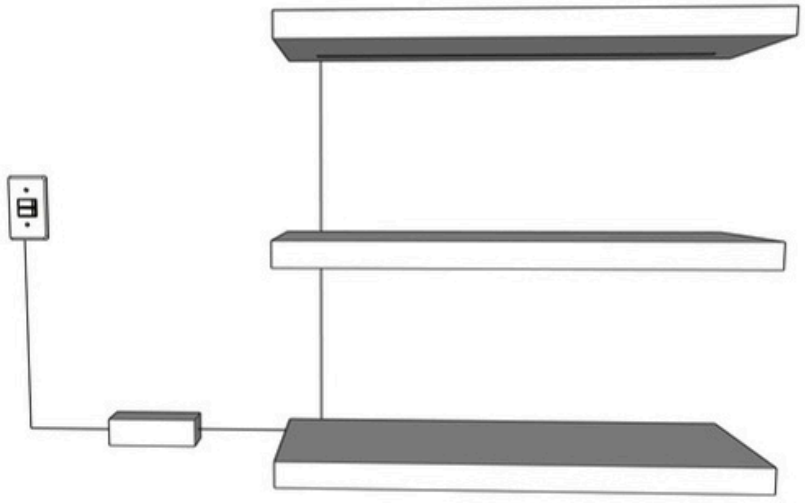
Consistent Brightness – All shelves receive equal power for uniform light.

Independent Operation – One shelf failure does not affect the others.

Easy Expansion – Additional shelves can be added without causing dimming issues.

Professional Reliability – Prevents the problems common in daisy chain setups.

❌ SERIES WIRING (DAISY CHAIN METHOD)



SERIES WIRING (DAISY CHAIN METHOD) ⚠️ NOT RECOMMENDED

Shelves are wired end-to-end, passing power from one to the next.

Voltage Drop – Shelves farther down the chain may appear dimmer.

Failure Cascades – A single bad connection can shut down everything downstream.

Limited Scalability – Adding shelves can overload the line and worsen inconsistencies.

While it uses less wiring, reliability and performance are compromised.

Installation Tip:

Always wire shelves in parallel, not series. Parallel wiring ensures every shelf gets full power for even brightness, and one loose connection won't affect the others.

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