Ariginal Lighting

1035 King Series

Smart LED Driver 100-240VAC

Technical Datasheet

Ariginal Product

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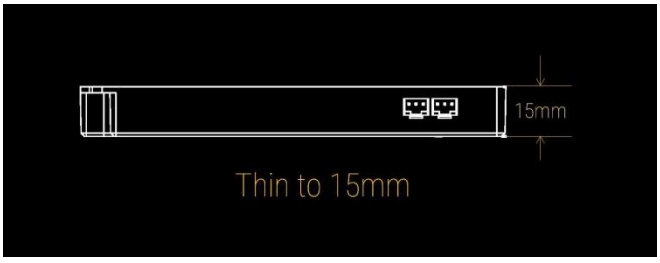
I. Products Overview

The Ariginal "King" Series LED Driver is a high-quality constant voltage power supply designed specifically for LED lights with dimming functionality. It converts and regulates electrical power from the mains (100-240V AC) to the correct voltage (12V or 24V DC) and current required for LED operation, ensuring stable, efficient, and long-lasting performance.

With its linkable capability and a power output of up to 1920W, the "King" driver is suitable for a wide range of LED lights, including monochrome and tunable white, and supports both wired and wireless control methods simultaneously, offering ultimate compatibility.

Its 15mm ultra-thin profile, reliability, and PF >0.95 energy efficiency make it an ideal choice for both residential and commercial lighting installations.

The "King" Series sets the standard for superior LED power management, providing maximum control, safety, and flexibility for your lighting setups.



Applications:
Recessed or surface-mounted behind or on top of cabinets.

II. Product Code

The descriptions in this document are applicable to the following products only:

Ariginal Smart LED Driver (King Series).

Item Code	Input Voltage	Output Voltage	Output Power	Dimension
10352411	100-240VAC	12VDC	24W	187*55*15mm
10353611	100-240VAC	12VDC	36W	187*55*15mm
10356011	100-240VAC	12VDC	60W	230*74*15mm
10352421	100-240VAC	24VDC	24W	187*55*15mm
10353621	100-240VAC	24VDC	36W	187*55*15mm
10356021	100-240VAC	24VDC	60W	230*74*15mm
10359621	100-240VAC	24VDC	96W	230*74*15mm

III. Features

The Ariginal “King” series LED Driver is the smartest LED Driver in the world, featuring in:

❶ Ultimate compatibility.

Compatible with wireless and wired systems.

"King" is engineered for full compatibility with both wireless and wired lighting systems at the same time.

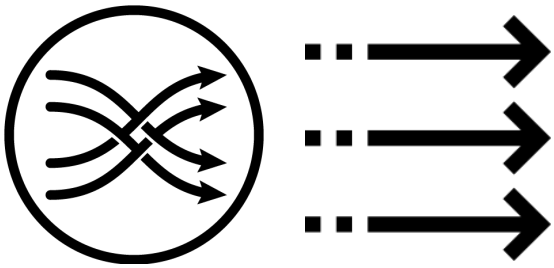
Uniquely designed to support both systems simultaneously, it allows you to connect wireless controls and traditional wired switches to a single driver at the same time. This enables seamless operation, where both systems can function together, offering unparalleled flexibility and control in your lighting applications.

Compatible with monochrome and tunable white lights.

"King" is designed to support both monochrome and tunable white lights at the same time.

You can connect both types of lights to a single driver simultaneously, allowing them to work together seamlessly. This versatility gives you the freedom to control different lighting environments from one driver, combining the simplicity of monochrome lighting with the adaptability of tunable white, all in one system.

Compatible with sync and async control.



"King" offers compatibility with both sync and async control methods at the same time.

You can connect both control types to the same driver simultaneously, allowing for synchronized control of all lights or independent adjustment of each light. Sync control ensures all lights respond uniformly, while async control lets you adjust individual lights separately. Each method requires its own dedicated switch or remote, providing you

Compatible with sensor-activated lights.

Additionally, the "King" driver is equipped with dedicated, uncontrolled ports designed specifically for lights that have built-in sensors.

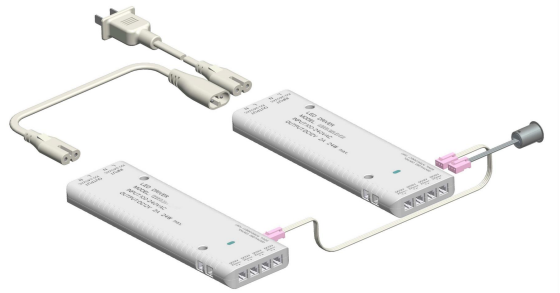
This feature allows for seamless integration with sensor-activated lighting, such as drawer light, PIR light etc, ensuring that the lights automatically respond to environmental changes without the need for manual actions.

It enhances convenience and functionality, making

with maximum flexibility in managing your lighting environment.

it an ideal solution for smart lighting setups.

❷ Linkable LED drivers, fulfilling a max 1920W output.



"King" features impressive linkable capabilities, allowing you to connect up to 20 drivers together for a maximum output power of 1920W. This flexibility means you can power an entire house with just one configuration.

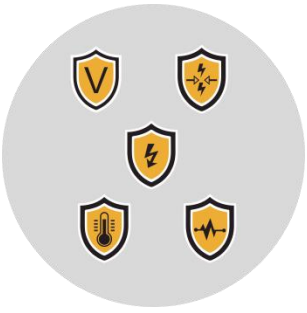
Whether you prefer to control all linked drivers from a single switch or multiple switches, the system adapts to your needs, providing cohesive management of your lighting. This versatility makes it an ideal solution for any residential or commercial lighting project.

❸ PF ≥ 0.95, the highest power efficiency in the world.

As everyone knows, PF (power factor) is the number one element in judging an LED driver's quality. The "King" series LED drivers, with a power factor of 0.95 or higher, represent the highest achievement in the industry worldwide.

This outstanding level of energy efficiency minimizes power loss and maximizes performance, ensuring superior reliability and energy savings. It's the pinnacle of LED driver technology, setting a global standard for excellence in both residential and commercial lighting systems.

❹ Fully protected.



"King" features six key protections for safe operation:

Low Voltage Protection: Automatically shuts down when voltage drops too low.

Short-Circuit Protection: Cuts off power to prevent hazards from short circuits.

Lightning Protection: Safeguards against surges from lightning strikes.

❺ Plug and Play.

The "King" driver is designed with a user-friendly plug-and-play system, ensuring that installation is both quick and hassle-free.

It offers multiple versions with varying output power to meet different requirements. The 60W/96W provides up to nine socket terminals, allowing a wide range of devices, including LED lights, wired switches, wireless receivers, and signal linkage cables.

Overheat Protection: Shuts down to prevent damage from excessive heat.

Over-Current Protection: Stops power flow during excessive current to prevent failures.

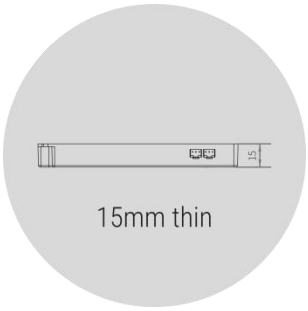
Overload Protection: Prevents the driver from exceeding its maximum power output, ensuring safe operation.

These comprehensive safety features ensure reliable performance and peace of mind for all your lighting needs.

By eliminating the need for complex wiring or soldering, the "King" driver streamlines the process, allowing you to quickly set up and configure your lighting system. Simply plug in the connectors, and you're all set.

The plug-and-play design also makes system maintenance, repairs, and replacements extremely easy. With minimal effort, you can keep your system running smoothly and efficiently.

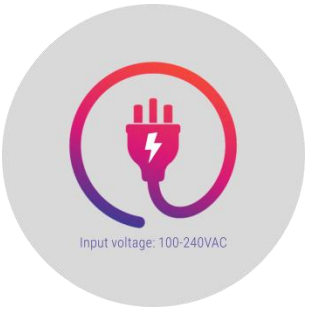
❻ 15mm thin, palm-size alike.



"King" features a slim 15mm thickness, and palm-size, making it perfect for recessed installation or discreetly hiding behind the back or top panels of cabinets. With standard wood panels typically measuring 18mm thick, this compact design ensures a seamless fit, allowing you to maintain a clean and unobtrusive aesthetic in your furniture.

This thoughtful design not only enhances the visual appeal of your space but also maximizes functionality by keeping the lighting system concealed yet accessible.

❼ Wide voltage and fireproof.



The "King" driver supports a wide input voltage range of 100-240V, 50/60Hz, making it compatible with global electrical systems. It offers flexible output voltage options, including 24W, 36W, and 60W at both 12V and 24V, and 96W at 24V only, catering to various lighting needs.

In terms of safety, the "King" is fireproof, MM mark certified, and approved for installation on furniture surfaces, wood products, and appliances.

This ensures reliable and secure performance in diverse environments.

❽ Install with screw or adhesive tape, optional.

❾ Universal C7 plug.

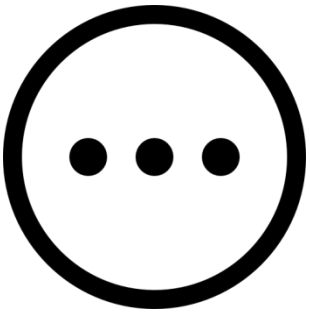
“King” can be recessed into or surface-mounted onto the cabinet using screws or adhesive tape, depending on your scenario.

“King” adapts C7 universal plug, ensures smooth compatibility and efficient power delivery for a variety of LED lighting applications.

⑩ Globally certified:

The Ariginal "King" Series LED Driver is globally certified, ensuring it meets the highest safety and performance standards required for markets worldwide. With years of industry expertise, we provide our customers with a reliable, certified product that is ready for immediate use in all major global markets. From energy efficiency to safety, the "King" Series complies with the stringent regulations of North America, Europe, Asia, and beyond, making it an ideal solution for both residential and commercial lighting installations across diverse regions.

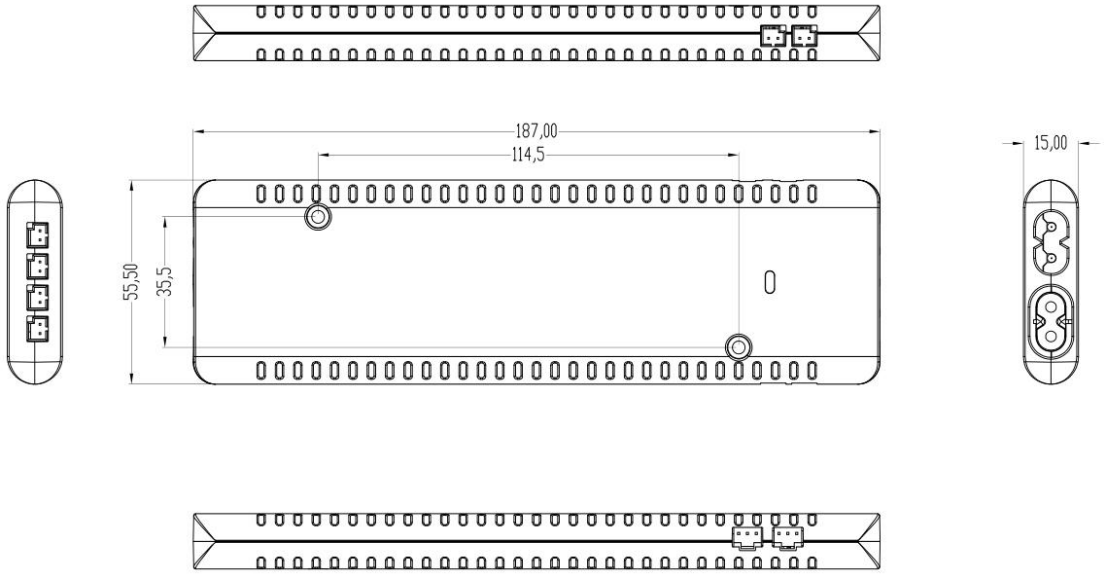
More features:



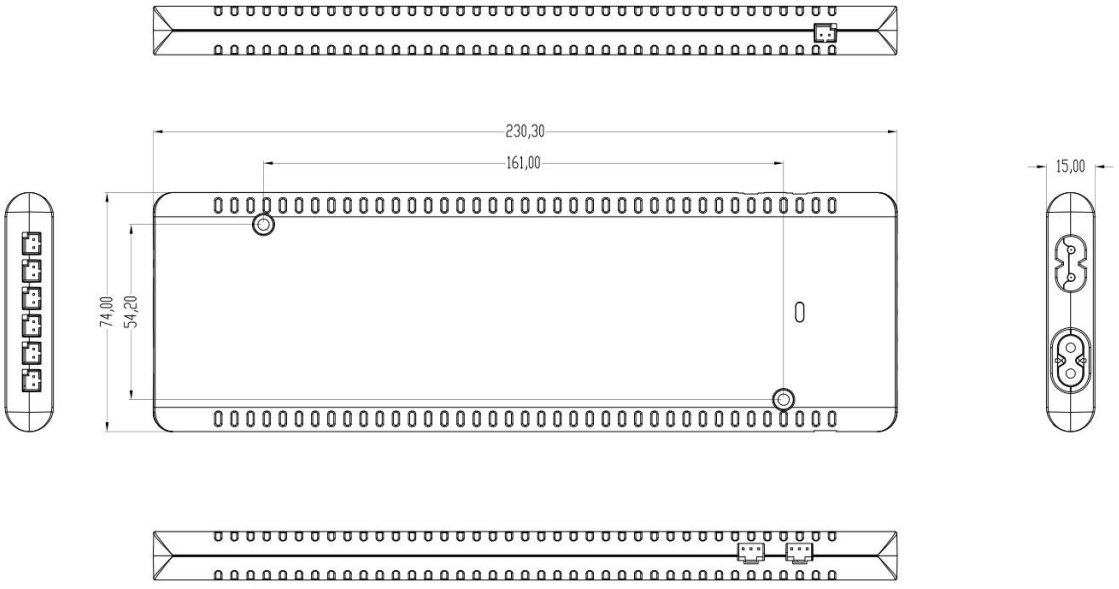
- Degree of protection: IP20
- Lifetime: >50,000 hours
- Safety: Class 2
- Material/Color: Plastic, white
- Supplied with mounting accessories and power cord
- Can be combined with all Ariginal receivers and wired switches

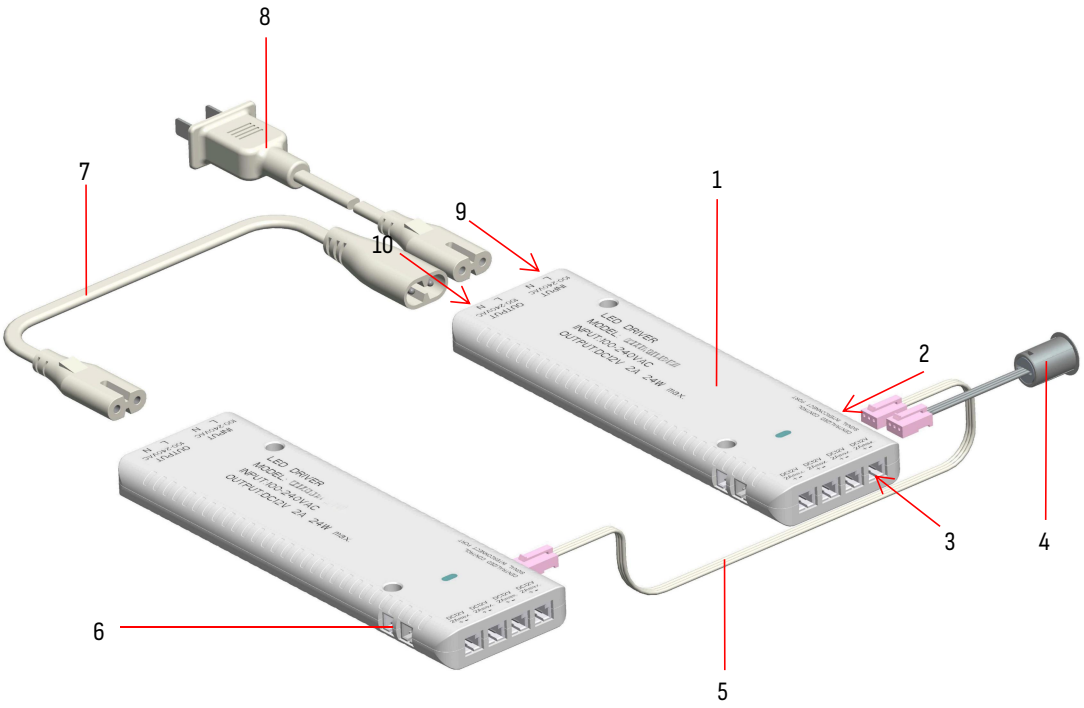
IV. Dimensions & Structures

24W/36W



60W/96W





No.	Picture	Structure name	Explanation
1	See above	Product body	
2	See above	3-pin ports	One Driver has two sets of 3-pin ports, these two ports are the same, and are used to connect: (1) “Wired Captain Switch”, to enable master control by wired switch; (2) “Master Wireless Receiver”, to enable master control by wireless switch; (3) “Signal Linker”, to link up to 20 LED Drivers with signal interconnecting cable, to enable master control by one piece of Wired Switch or Wireless Switch;
3	See above	DuPont output port	Standard DuPont female plug, used to connect LED lights. 60W/96W version has 6 ports; 24W/36W version has 4 ports.
4	See above	Wired Captain Switch	3-pin Wired Captain Switch, it has different versions: IR, PIR, Door, Dual-Door sensor, Touch etc.

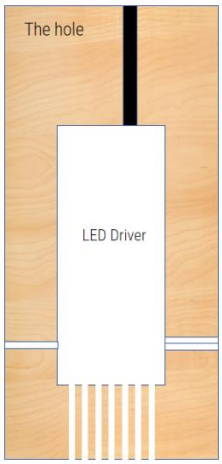
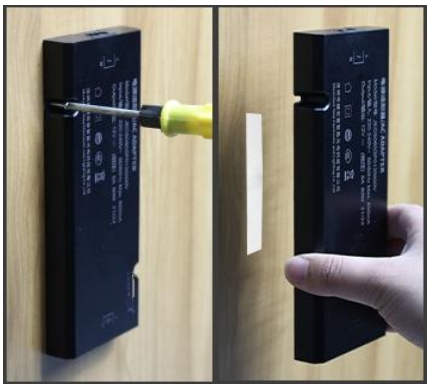
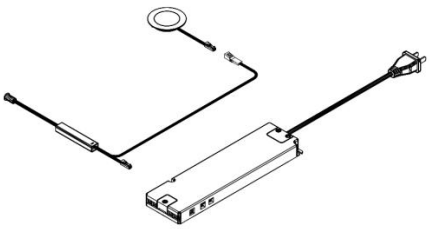
5	See above	Signal Linker	The signal linker is a 3-pin interconnecting cable with connectors on both ends, designed to connect two LED drivers. It allows signals to be transmitted between the drivers, enabling one switch to control both LED drivers simultaneously.
6	See above	Independent DuPont output port	Standard DuPont female plug, used to connect LED lights. However, lights connected to these ports are not controlled by the master switch. It's mainly designed for "Wired Inline Switch" and the Lights having built-in self-activated sensors. 60W/96W version has 1 ports; 24W/36W version has 2 ports.
7	See above	Power Linker	The Power Linker is an interconnecting cable with C7 plugs on both ends, designed to connect the A/C input power of two LED drivers. When the first driver is connected to mains power, up to 19 additional interconnected drivers can receive power from it using this cable. Making the total power of the system up to 1920W.
8	See above	A/C Power Cable	C7 Plug
9	See above	A/C Power Output Port	Used to connect the Power Linker.
10	See above	A/C Power Input Port	C7 Plug

V. Specifications

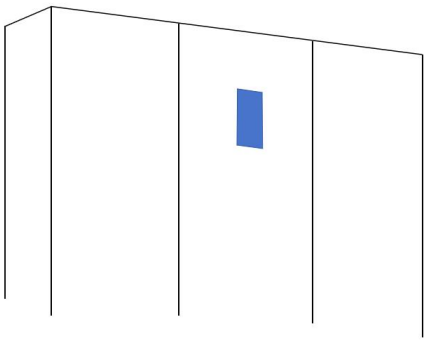
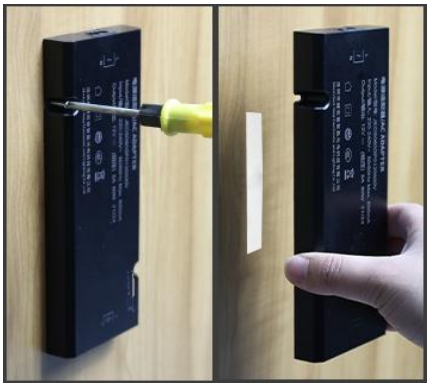
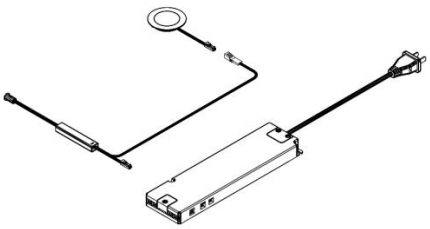
Parameter	Value
Input voltage:	100-240V AC
Input Frequency:	50/60 Hz
Output voltage:	12VDC or 24VDC, optional
Output power:	24W/36W/60W (12V); 24W/36W/60W/96W (24V);
Power factor	0.95
Functions:	Convert A/C mains power to D/C power.
Dimmable:	Yes
Linkable:	Yes
Installation:	Recessed/Surface-mounted, optional
Connections:	4x DuPont output ports, 2x 3-pin integrated control ports, 2x independent DuPont output ports (24W/36W); 6x DuPont output ports, 2x 3-pin integrated control ports, 1x independent DuPont output ports (60W/96W);
Connection cable length (AC power cable)	1000mm
Connection cable length (power liner)	200mm
Connection cable length (signal linker)	200mm
Connection cable assembling	Separate, detachable.
Materials:	Plastic
Operating temperature (C °)	-20～45 °C
ta	25 °C
tc	75 °C
Protection:	Low Voltage Protection; Short-Circuit Protection; Lightning Protection; Overheat Protection; Over-Current Protection; Overload Protection.
Waterproof rating (IP)	IP20
Product color:	Customizable, white typ.
Dimensions (product body):	187*55*15mm (24W/36W) 230*74*15mm (60W/96W)
Warranty period:	5 years

VI. Installation

How to install (recess) Ariginal Smart LED Driver?

No.	Action	Illustration	Description
Step 1:	Make Hole		Mark the location of the hole which is used to accommodate the LED driver and the wires according to the chosen model after measuring the cabinet. Then use cutter to make the hole.
Step 2:	Secure the LED Driver in place		Put the LED Driver into the hole, and secure it to the wood board using screw or double-sided adhesive.
Step 3:	Connect the Wires and test the system		Connect the A/C cable, then connect the sensors, switches if applicable. When all is set, power up the system to check whether everything works as expected.

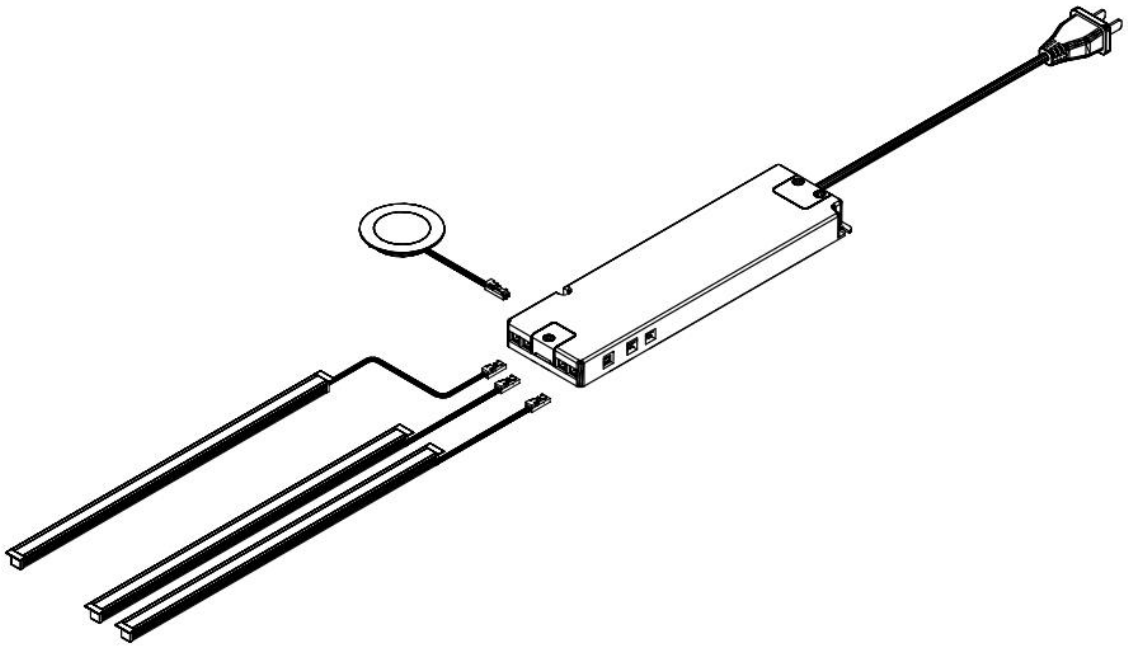
How to install (surface-mounting) Ariginal Smart LED Driver?

No.	Action	Illustration	Description
Step 1:	Mark the installation location		Mark the installation location for the surface-mounted LED driver on the back or top of the closet/cabinet, ensuring it allows for convenient connections to as many LED lights as possible.
Step 2:	Secure the LED Driver in place		Put the LED Driver at the marked location, and secure it onto the wood board using screw or double-sided adhesive.
Step 3:	Connect the Wires and test the system		Connect the A/C cable, then connect the sensors, switches if applicable. When all is set, power up the system to check whether everything works as expected.

VII. Usage

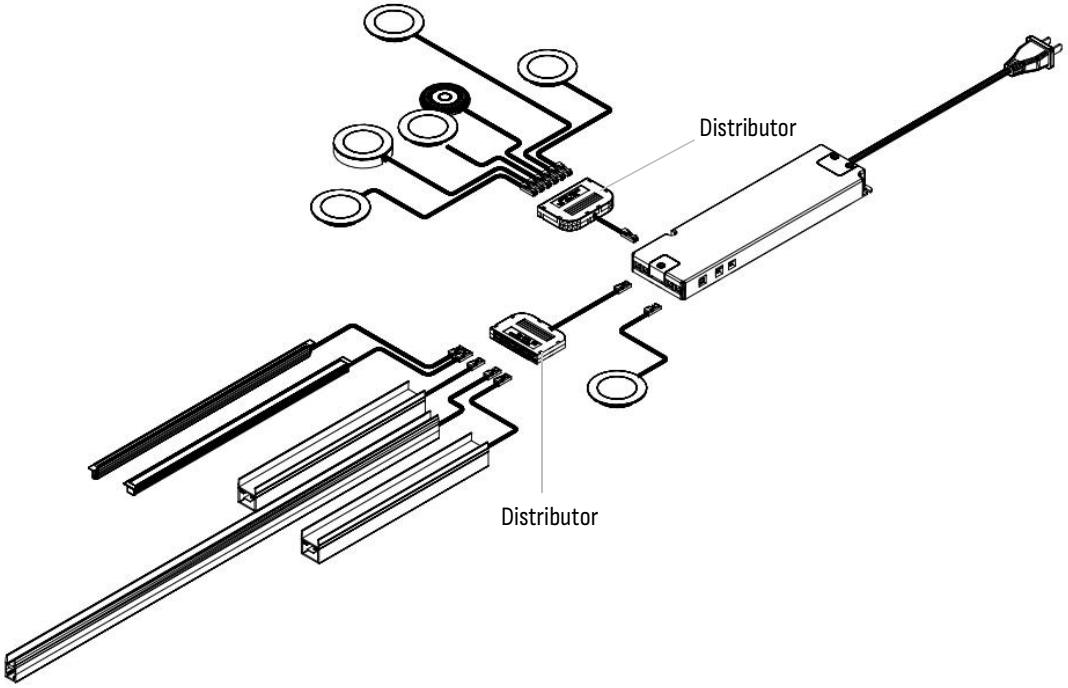
The Ariginal Smart LED Driver offers a wide range of advanced features and is designed for ultimate compatibility with various lighting control methods. Due to its versatility, proper usage may seem complex. To ensure optimal performance and fully unlock its potential, please follow the instructions outlined below.

Configuration 1: Using as a basic power supply.



In this configuration, the Ariginal Smart LED Driver operates as a straightforward power supply for your LED lights. Simply connect the LED lights to the driver, and the unit will continuously power them. To turn the lights off, unplug the driver from the power source. This configuration does not involve any switches or additional controls, making it ideal for simple lighting setups where basic on/off functionality is sufficient.

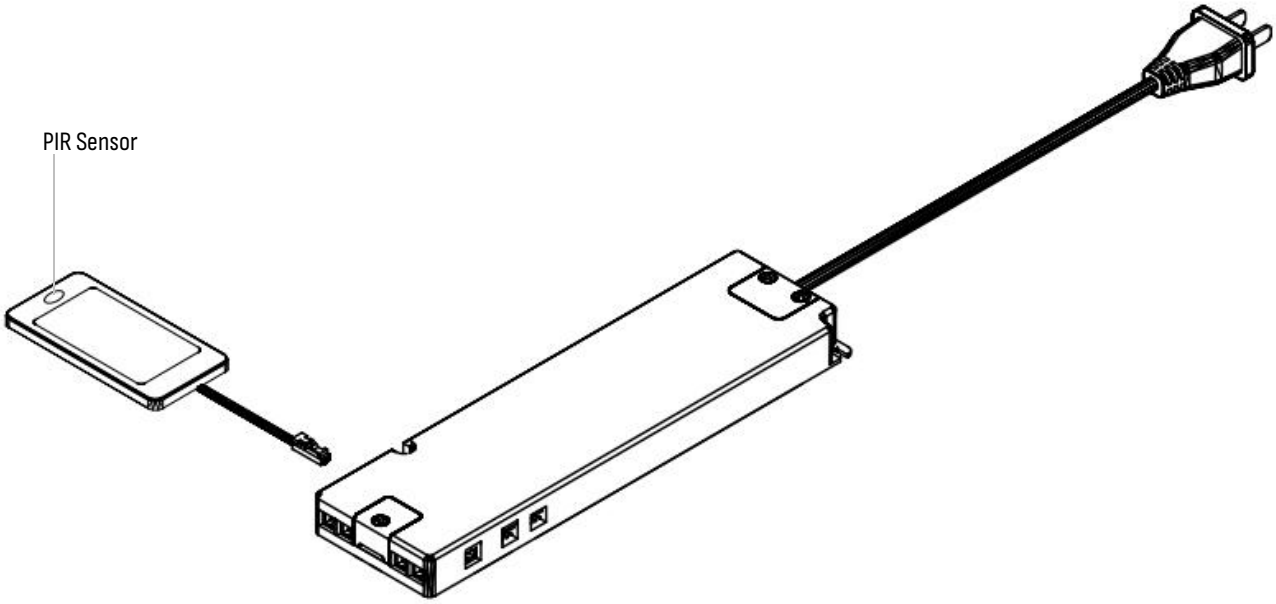
Configuration 2: Using with “Distributor”.



In this configuration, the Ariginal Smart LED Driver is paired with a "Distributor" to expand your lighting setup. By connecting one or more distributors to the driver, you can easily add additional LED lights, allowing for a larger and more flexible lighting system. This setup is perfect for installations requiring multiple lights to be powered from a single driver, providing a streamlined solution for extended lighting control without the need for multiple power supplies.

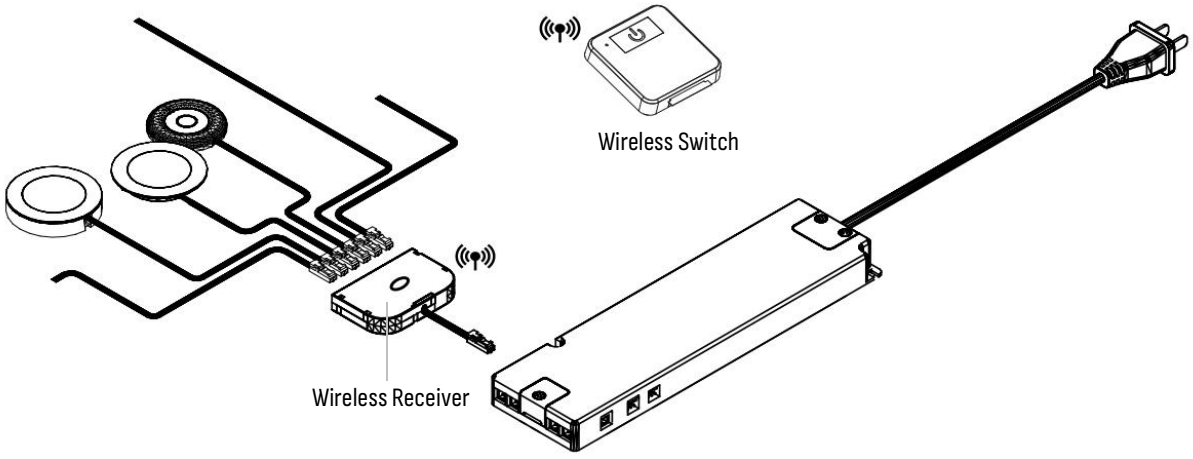
This configuration still does not involve any switches or additional controls, unplugging to turn off lights.

Configuration 3: Using the “Independent Port” (uncontrolled by master switch).



The independent port is designed to power lights with built-in sensors, such as PIR sensor lights or drawer lights with IR detection. This configuration allows these sensor-activated lights to operate independently, without being controlled by the master switch. It ensures that lights turn on automatically when motion is detected or when the drawer is opened, providing added convenience and functionality in your lighting system.

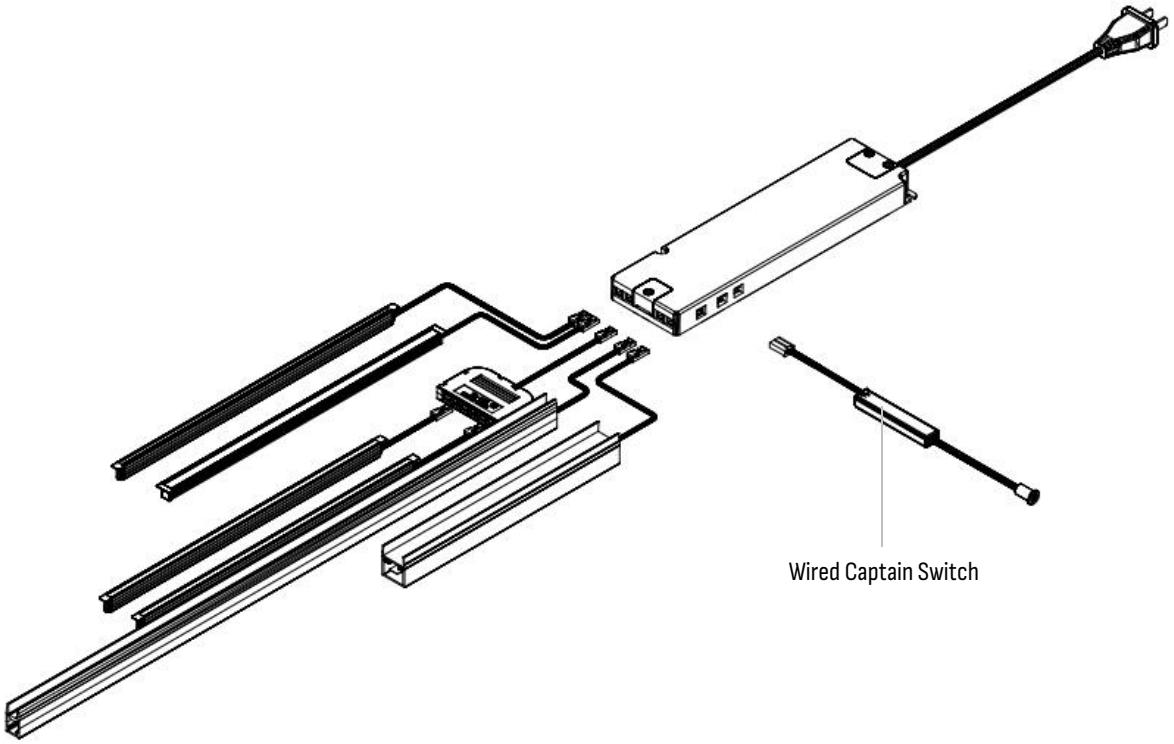
The independent port can also be connected with a Wireless Receiver to serve as a standalone lighting system that’s controlled by a Wireless Switch.



Meanwhile, The independent port can also be connected with a Wired Inline Switch to serve as a standalone lighting system that’s controlled by this inline switch. (Refer to configuration 6.)

Moreover, this independent port can be used with ordinary controlled ports at the same time.
These two kinds of output ports do not affect each other.

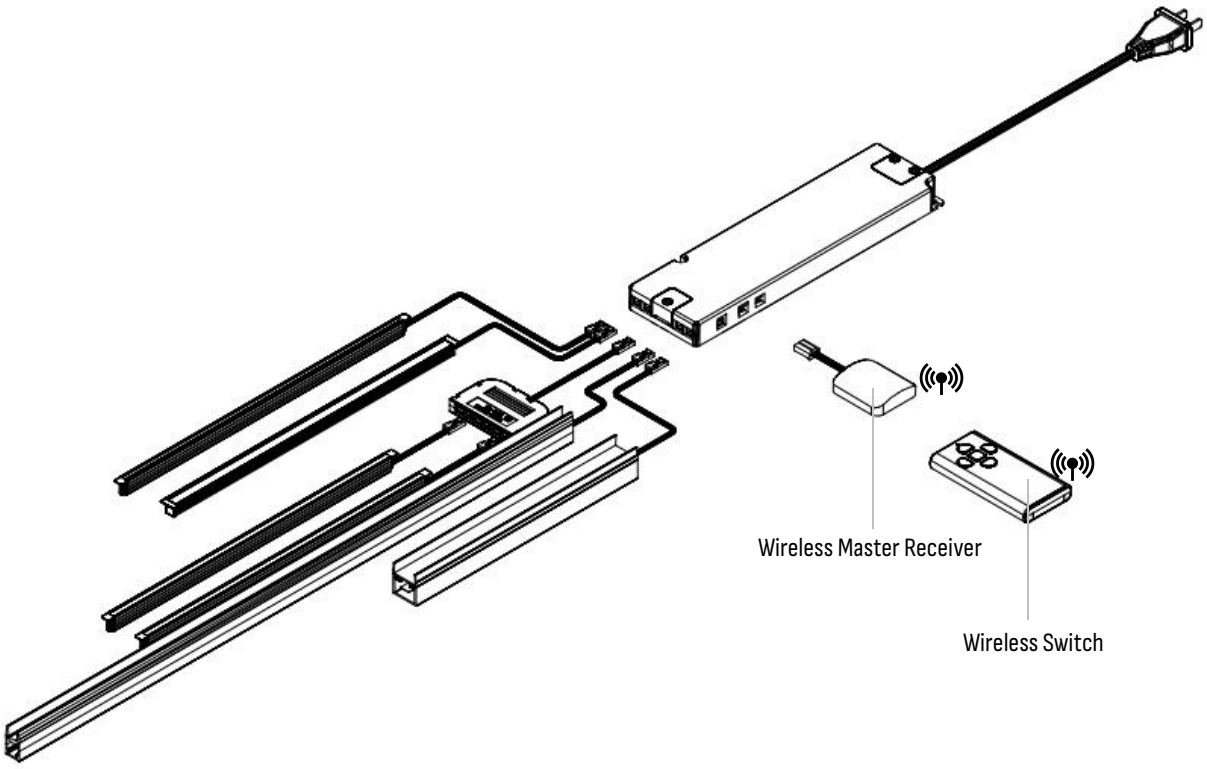
Configuration 4: Using with “Wired Captain Switch” for master control.



In this configuration, the Ariginal Smart LED Driver is used in conjunction with the "Wired Captain Switch" for centralized master control of your lighting system. The Captain Switch allows you to manage multiple lights or groups of lights from a single location. By connecting the driver to the Wired Captain Switch, you can control the power to your LED lights with ease, offering enhanced convenience and control for large or complex lighting setups. This configuration is ideal for situations where centralized control and efficient operation are essential.

You can use “distributor” to expand lighting connections.

Configuration 5: Using with “Wireless Master Receiver” for master control.

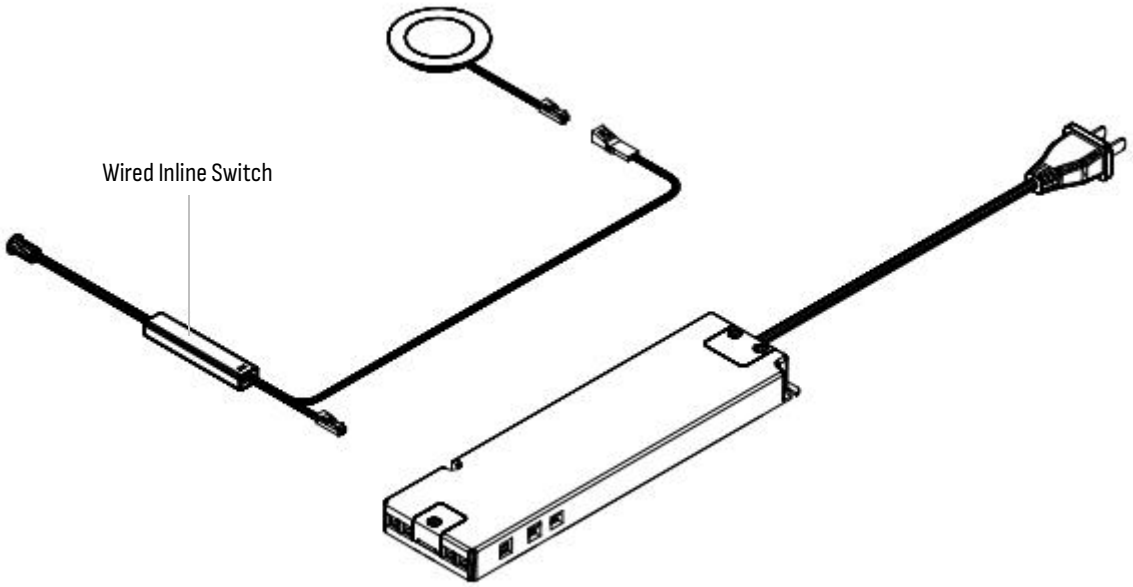


In this configuration, the Ariginal Smart LED Driver is paired with the "Wireless Master Receiver" to enable wireless master control of your lighting system. The Wireless Master Receiver works with wireless switches, and allows you to control multiple lights or groups of lights from a distance, offering a high level of convenience and flexibility.

This setup is ideal for situations where you need to control lights without the need for physical switches, providing seamless integration with your smart home or wireless control systems. Perfect for modern, versatile installations, it offers ultimate freedom and ease of use.

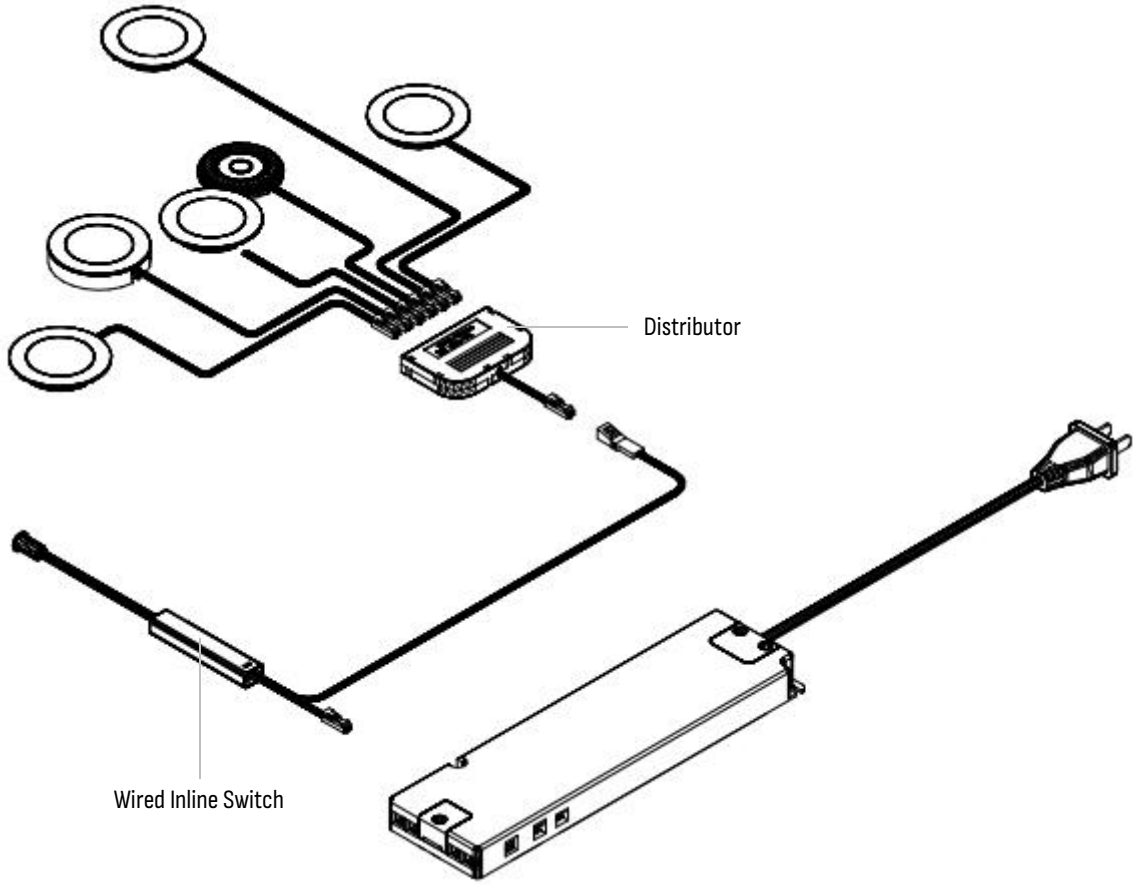
You can also use “distributor” to expand lighting connections.

Configuration 6: Using with “Wired Inline Switch” for individual control.



In this configuration, the Ariginal Smart LED Driver is connected to a "Wired Inline Switch" to provide individual control of each light or lighting zone. The Inline Switch allows you to turn the lights on and off manually, offering a straightforward, direct way to control each light independently. This setup is ideal for installations where you want precise control over specific lights without the complexity of a master control system, providing a simple yet effective solution for smaller or more targeted lighting arrangements.

Configuration 7: Using with “Wired Inline Switch + Distributor ” for master control.

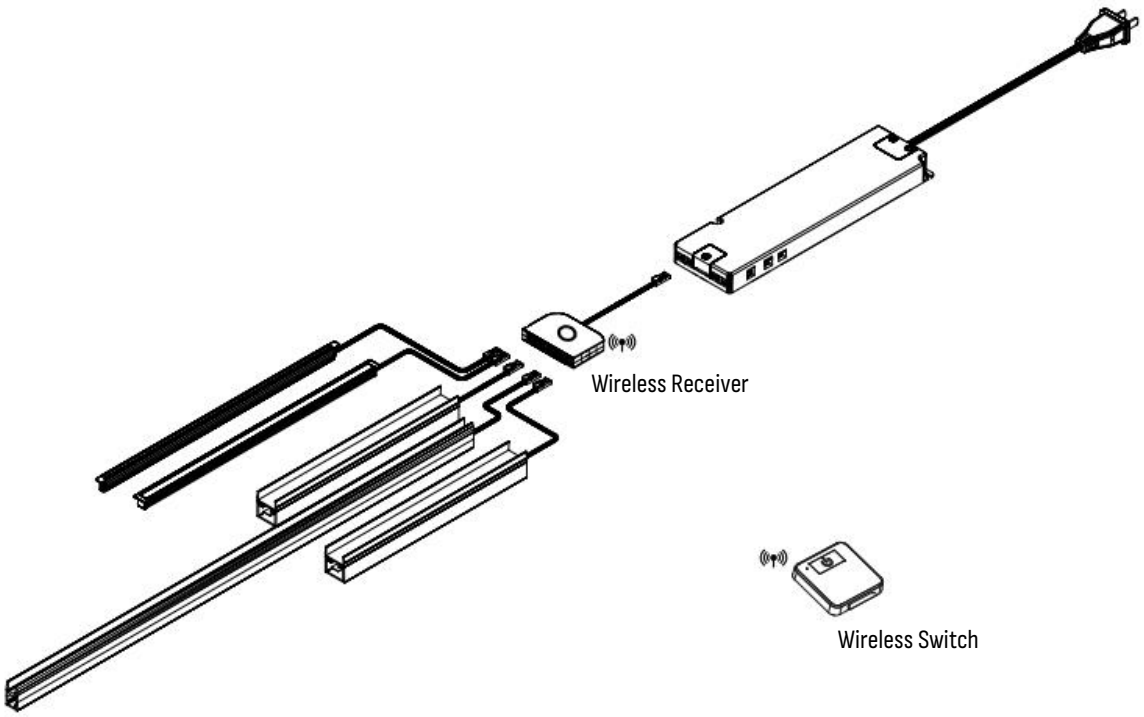


In this configuration, the Ariginal Smart LED Driver is paired with both a "Wired Inline Switch" and a "Distributor" to enable master control over multiple lights. The distributor is connected to the inline switch, allowing you to expand your lighting setup by adding additional LED lights. Once connected, all the lights linked to the distributor can be controlled simultaneously by the inline switch, providing centralized control for a larger lighting system.

This setup is ideal for scenarios where you need to manage multiple lights from a single switch, combining both the simplicity of manual control and the flexibility of expanding your lighting system.

Surely you can use more than one “distributor” to multiply LED light connections.

Configuration 8 (the most flexible configuration): Using with “Wireless Receiver”.

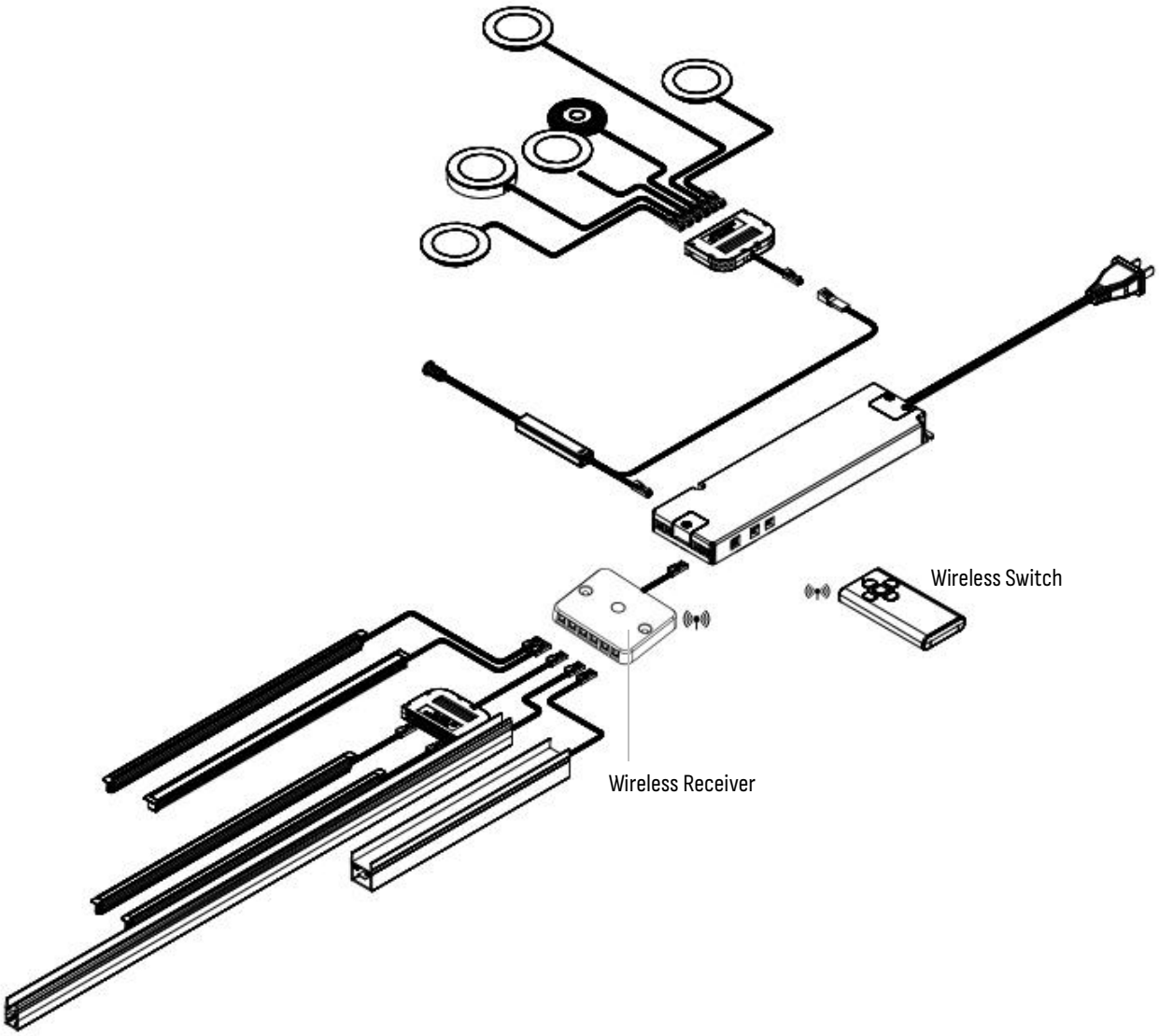


In this configuration, the Ariginal Smart LED Driver is connected to a "Wireless Receiver," which features six output ports for connecting multiple LED lights. The Wireless Receiver works in conjunction with a wireless switch, allowing you to control all the connected lights wirelessly.

- Individual control
  When only one LED light is connected to the receiver, it will control just that light.
- Master control
  However, when multiple lights are connected, the receiver acts as a "master control" and manages all of them simultaneously. For even greater flexibility, you can use a distributor to expand the number of lights, further enhancing your lighting setup.
- Asynchronous control
  When two LED lights are connected to two receivers separately, you can use two wireless switches to control them separately.
- Synchronous control
  When two LED lights are connected to two receivers separately, you also can use one wireless switch to pair with two receivers and control them simultaneously.

This configuration provides a versatile and scalable solution for wireless control across a wide range of lighting installations.

Configuration 9 (the most versatile configuration): Using with “Wireless Control” and “Wired Control” at the same time.

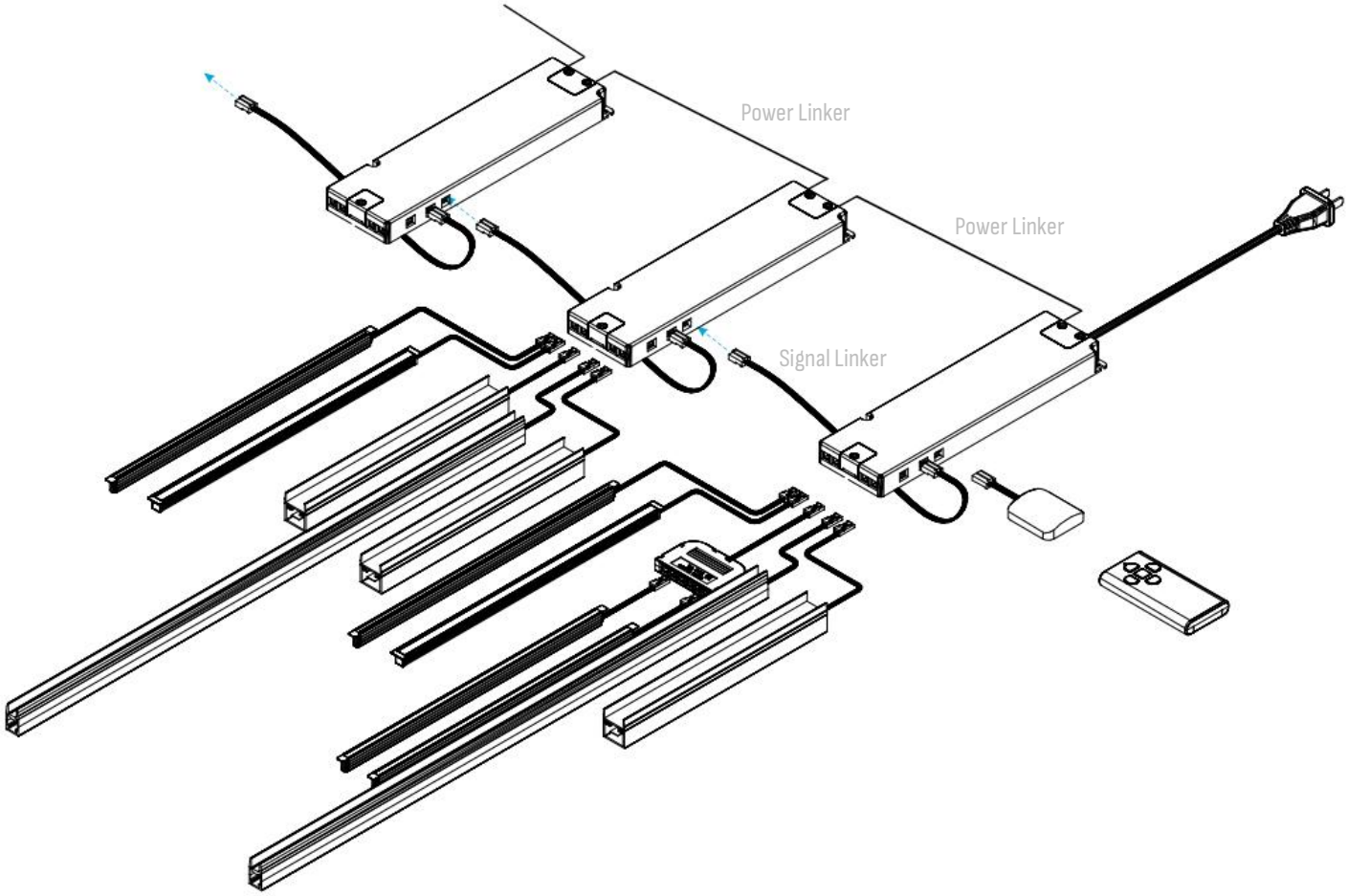


In this configuration, the Ariginal Smart LED Driver supports both wireless and wired control methods at the same time, offering maximum flexibility and convenience.

You can control a group of lights using a wireless switch for remote operation and another group of lights with a wired switch for manual control from a fixed location.

This dual-control setup allows for versatile management of your lighting system, providing the option to control your lights through both physical and wireless interfaces, all without any interference between the two control methods. Ideal for installations where both convenience and hands-on control are required.

Configuration 10 (the most powerful configuration): Link all Drivers and control from one place.



In this configuration, you can link up to 20 Ariginal Smart LED Drivers (with a maximum combined power output of 1920W) to create a unified lighting system.

All drivers are connected and controlled from a single switch (could be wireless switch or wired captain switch), enabling centralized control of the entire lighting setup.

This configuration is ideal for large spaces or installations that require seamless operation of multiple lights from one central location, offering both simplicity and efficiency in managing extensive lighting systems. Perfect for commercial, industrial, or expansive residential applications.

Summary:
The Ariginal Smart LED Driver is a highly flexible and efficient solution designed to meet the needs of various lighting setups. Whether you need a simple, direct power supply or a more advanced configuration with multiple lights, distributors, switches, and receivers, the driver can adapt to your requirements.

Above configurations are examples, you can figure out more of your own setups.

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