1035 King Series

Smart LED Driver 100-240VAC

R3

Technical Datasheet

Original Product

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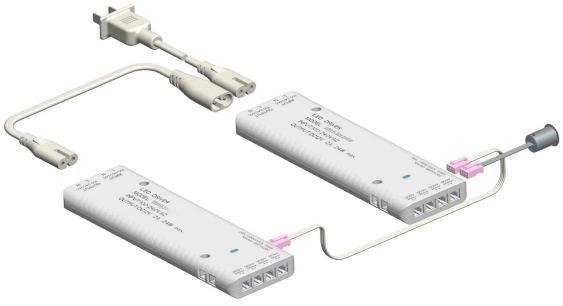
I. Products Overview

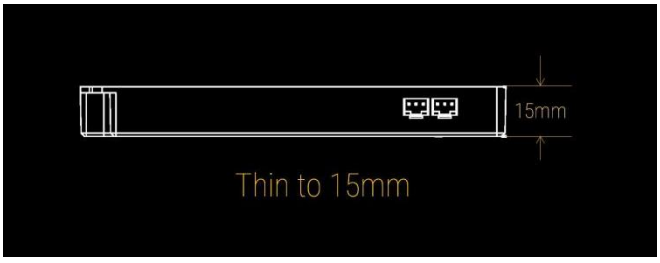
The Ariginal "King" Series LED Driver is a high-quality constant voltage power supply designed specifically for LED lights with dimming functionality. It converts and regulates electrical power from the mains (100-240V AC) to the correct voltage (12V or 24V DC) and current required for LED operation,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

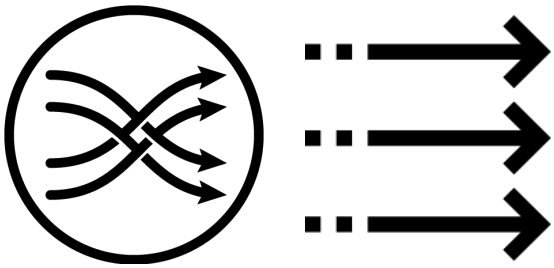
Uniquely designed to support both systems simultaneously, it allows you to connect wireless controls and traditional wired switches to a single driver at the same time. This enables seamless operation, where both systems can function together, offering unparalleled flexibility and control in your lighting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

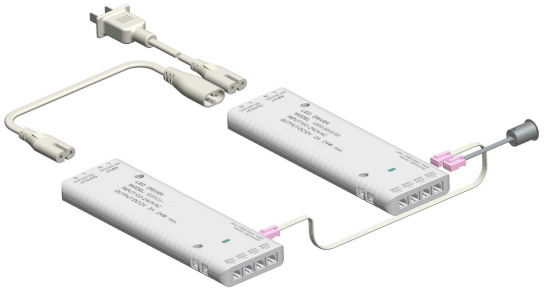
This feature allows for seamless integration with sensor-activated lighting, such as drawer light, PIR light etc, ensuring that the lights automatically respond to environmental changes without the need for manual actions.

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.

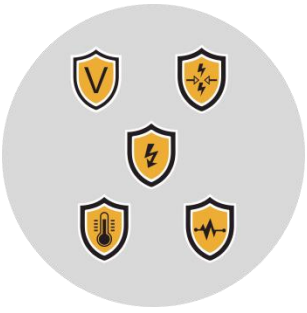
Whether you prefer to control all linked drivers from a single switch or multiple switches, the system adapts to your needs, providing cohesive management of your lighting. This versatility makes it an ideal solution for any residential or commercial lighting project.

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.

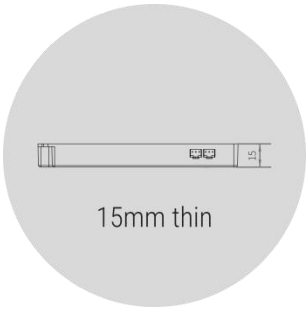
Overload Protection: Prevents the driver from exceeding its maximum power output, ensuring safe operation.

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.

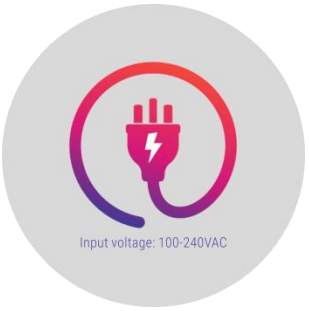
❻ 15mm thin, palm-size alike.



"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.

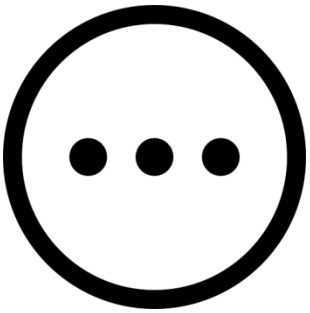
“King” can be recessed into or surface-mounted onto the cabinet using screws or adhesive tape, depending on your scenario.

“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.

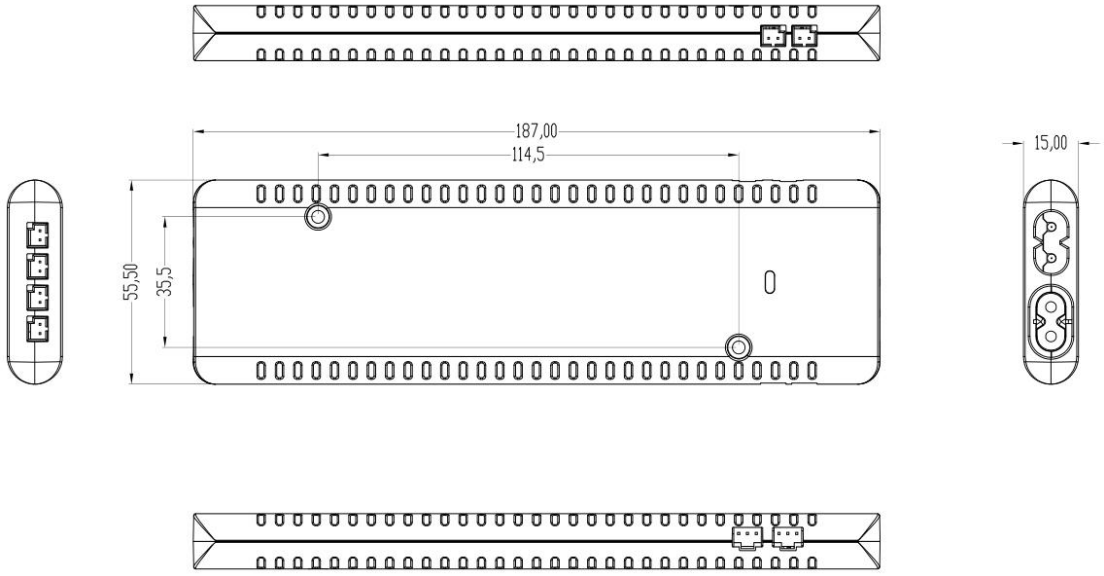
More features:



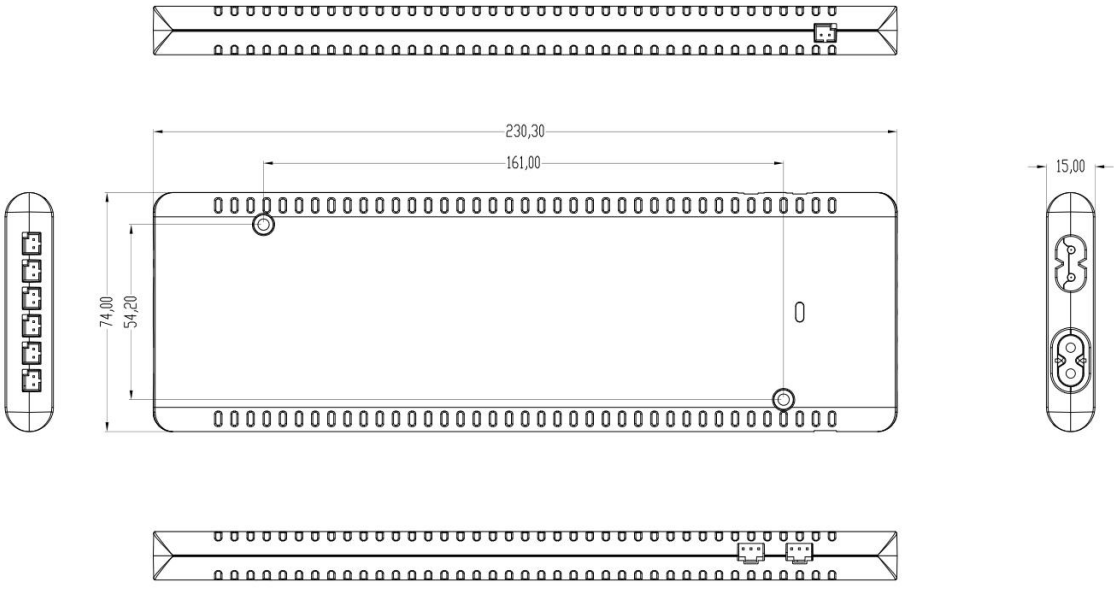
- Degree of protection: IP20
- Lifetime: >50,000 hours
- Safety: Class 2
- Material/Color: Plastic, white
- Supplied with mounting accessories and power cord
- Can be combined with all Ariginal receivers and wired switches

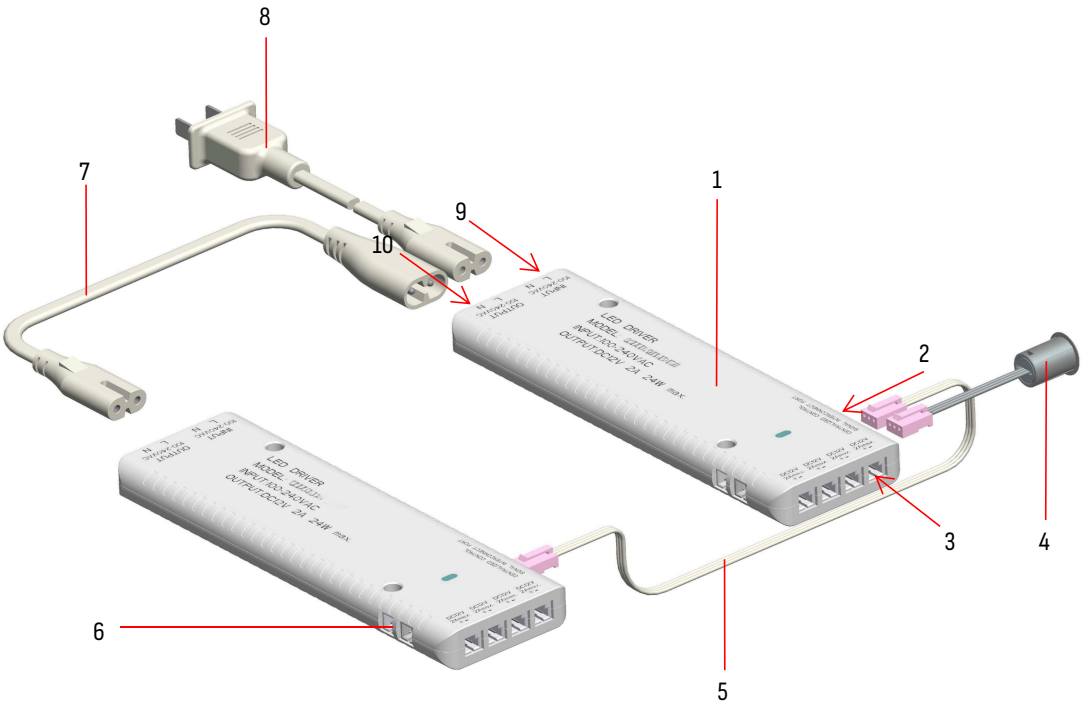
IV. Dimensions & Structures

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.

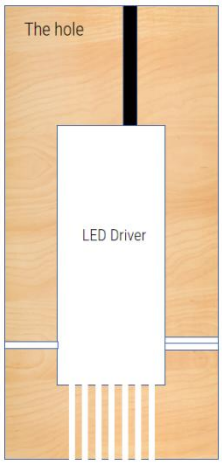
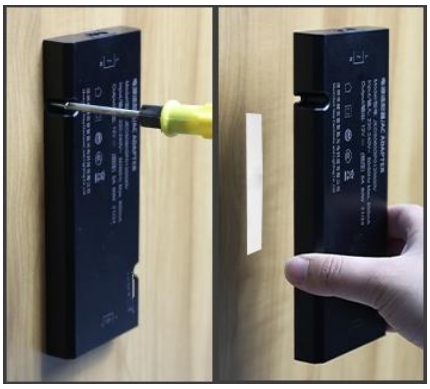
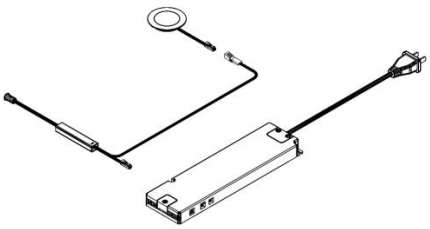
5	See above	Signal Linker	The signal linker is a 3-pin interconnecting cable with connectors on both ends, designed to connect two LED drivers. It allows signals to be transmitted between the drivers, enabling one switch to control both LED drivers simultaneously.
6	See above	Independent DuPont output 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

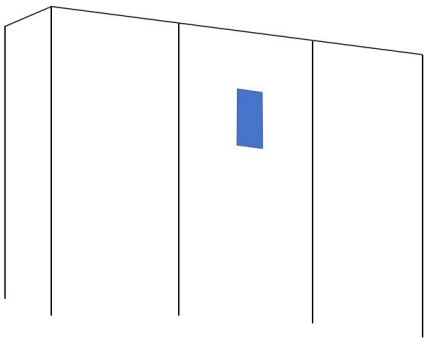
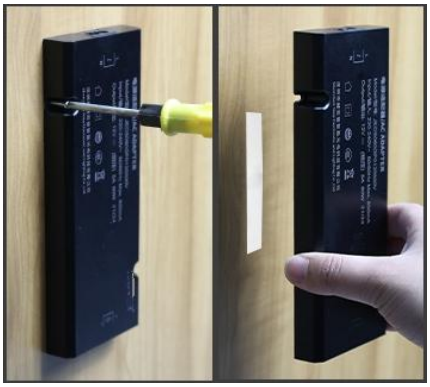
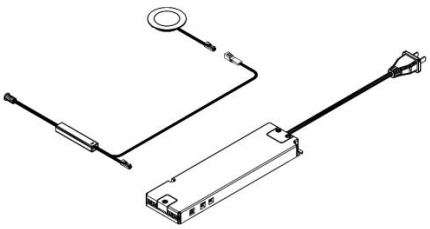
Parameter	Value
Input voltage:	100-240V AC
Input Frequency:	50/60 Hz
Output voltage:	12VDC or 24VDC, optional
Output power:	24W/36W/60W (12V); 24W/36W/60W/96W (24V);
Power factor	0.95
Functions:	Convert A/C mains power to D/C power.
Dimmable:	Yes
Linkable:	Yes
Installation:	Recessed/Surface-mounted, 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.

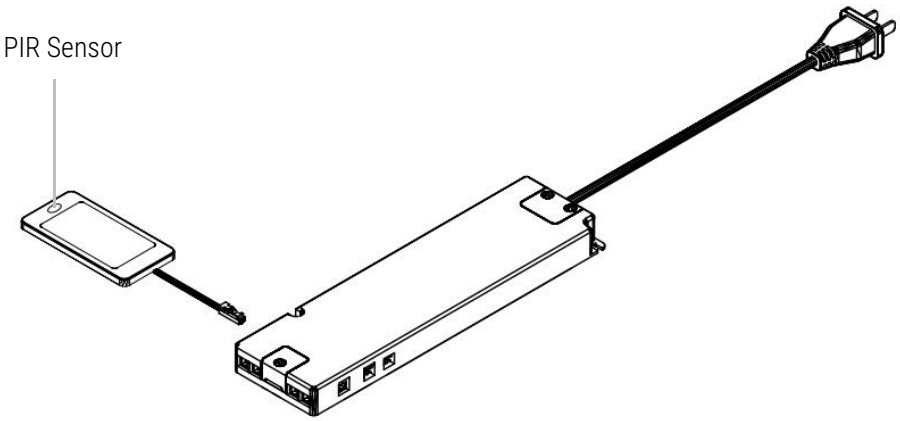
How to install (surface-mounting) Ariginal Smart LED Driver?

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

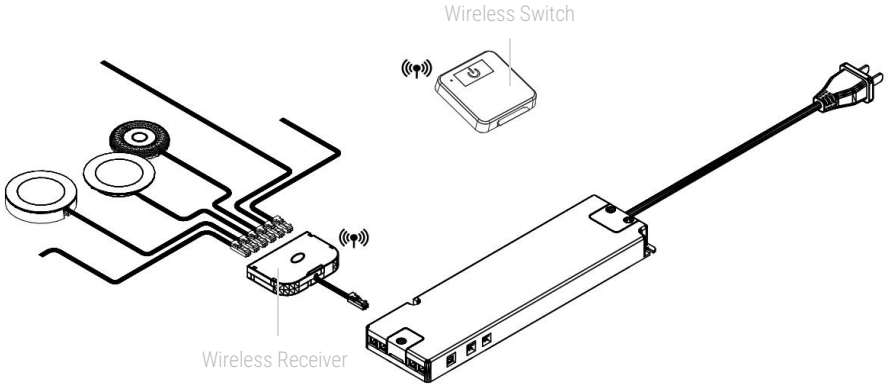
The Ariginal Smart LED Driver offers a wide range of advanced features and is designed for ultimate compatibility with various lighting control methods. Due to its versatility, proper usage may seem complex. To ensure optimal performance and fully unlock its potential, please follow the instructions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

Configuration 1: Using independent port with self-activated light.



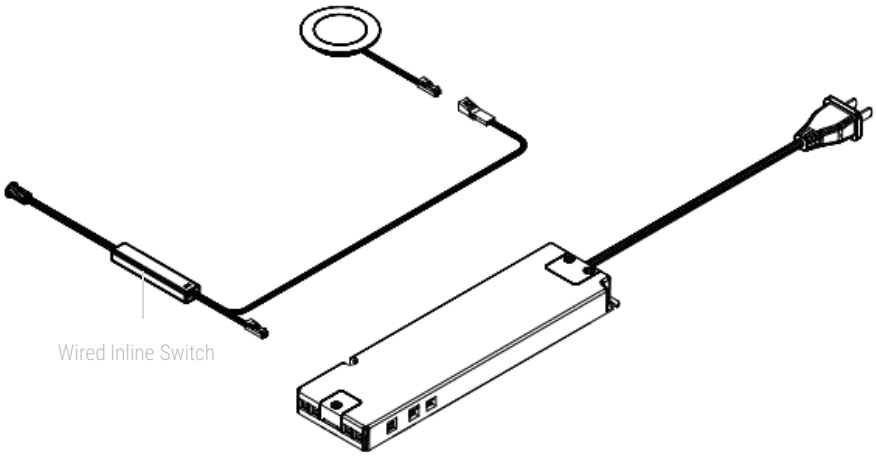
The independent port is designed to power lights with built-in sensors, such as PIR sensor lights or drawer lights with IR detection. This configuration allows these sensor-activated lights to operate independently, without being controlled by the master switch. It ensures that lights turn on automatically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

Configuration 2: Using independent port with Wireless Receiver.



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, but not controlled by "master switch".

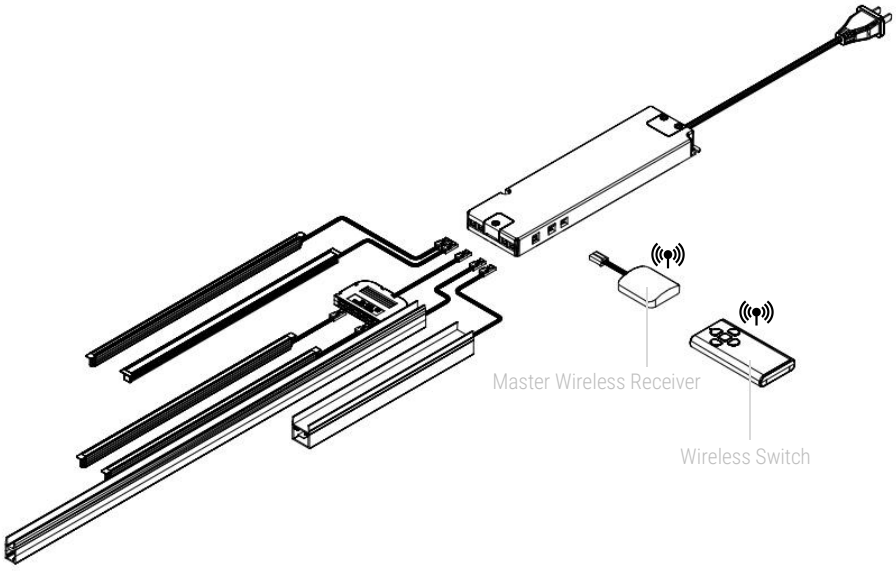
Configuration 3: Using independent port with Wired Inline Switch.



The independent port can also be connected to a Wired Inline Switch, creating a standalone lighting system controlled solely by the Inline Switch, without being affected by the master switch.

If a single light fixture is connected, the Inline Switch controls that fixture individually. However, if multiple light fixtures are connected via a Distributor, the Inline Switch will control all connected fixtures simultaneously.

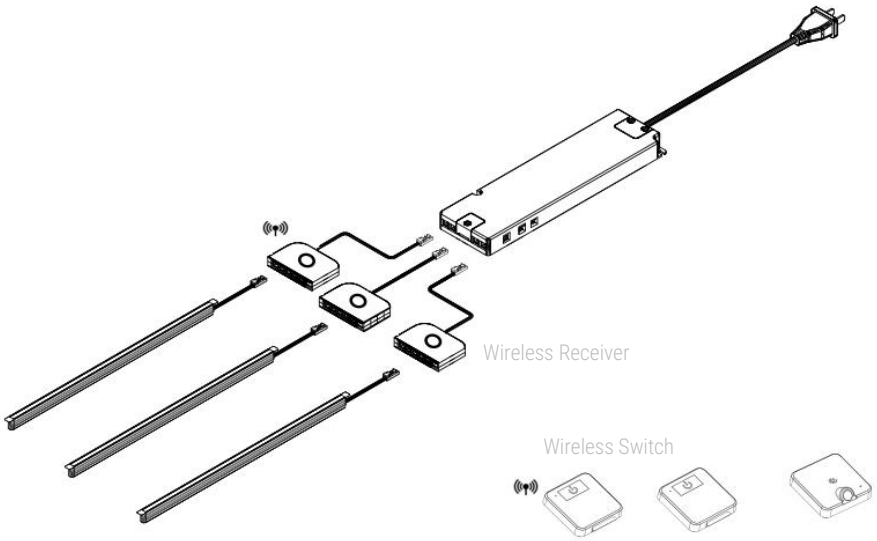
Configuration 4: Using controlled ports - Wireless Master Control.



In this configuration, a Master Wireless Receiver is connected to the 3-pin port of the LED Driver, serving as a relay station. It receives control commands from the Wireless Switch, transmits them to the LED driver, and ultimately controls the connected LED lights. Meanwhile, one or more light fixtures are connected to the controlled ports of the Driver.

Once set up, the Wireless Switch can seamlessly control all connected light fixtures simultaneously, regardless of the number of lights.

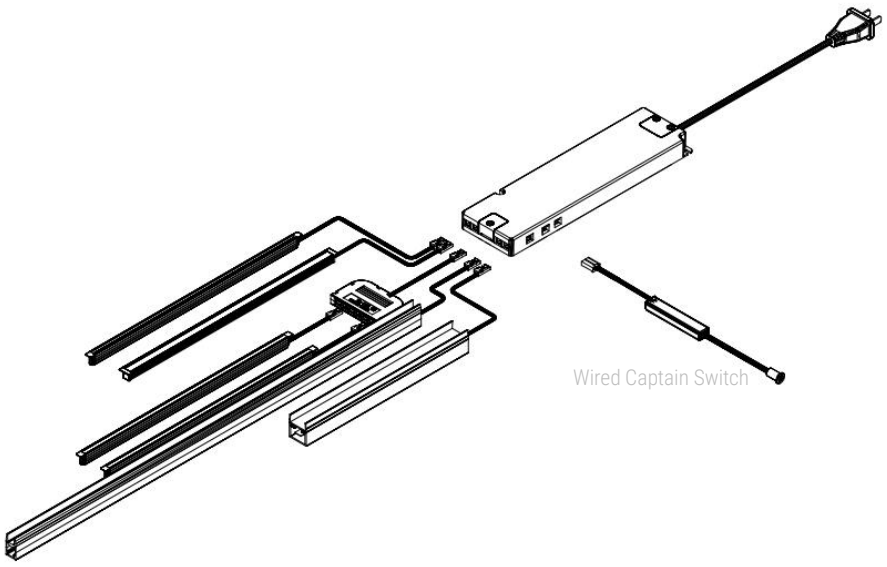
Configuration 4: Using controlled ports - Wireless Individual Control.



The "King" series LED Driver features 4 or 6 controlled output ports, depending on the model, allowing up to 4 or 6 Wireless Receivers to be connected simultaneously. Each Wireless Receiver can then be paired with a Wireless Switch, enabling independent control of the lights connected to that specific receiver.

Note: Each Wireless Receiver has 6 output ports, supporting up to 6 LED lights directly—or even more when using a Distributor. All connected lights will be controlled by the Wireless Switch paired with that receiver.

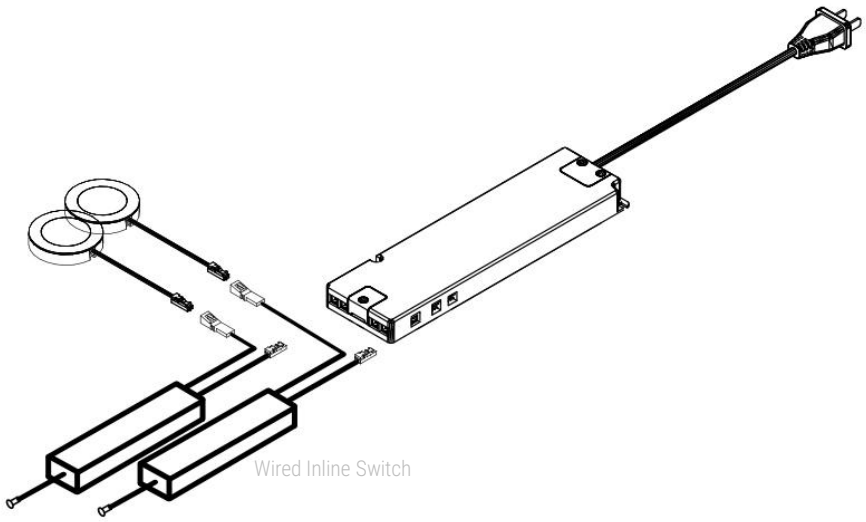
Configuration 5: Using controlled ports - Wired Master Control.



In this configuration, a Wired Captain Switch is connected to the 3-pin port of the LED Driver, Meanwhile, one or more light fixtures are connected to the controlled ports of the Driver.

Once set up, the Wired Captain Switch can seamlessly control all connected light fixtures simultaneously, regardless of the number of lights.

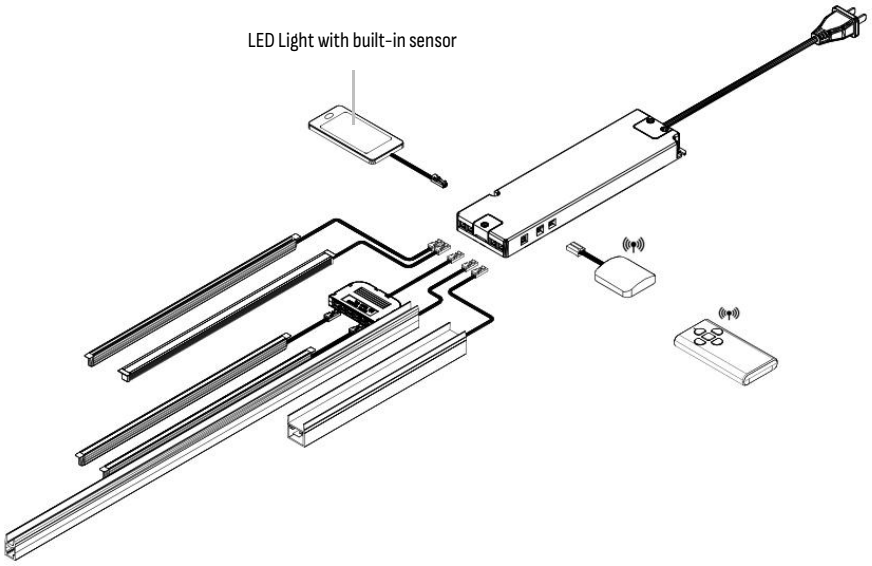
Configuration 6: Using controlled ports - Wired Individual Control.



The "King" series LED Driver is equipped with 4 or 6 controlled output ports, depending on the model, allowing up to 4 or 6 Wired Inline Switches to be connected simultaneously. Each Wired Inline Switch operates independently, controlling only the light fixtures connected to it.

Note: Each Wired Inline Switch has one output port, but this can be expanded using Distributors. All lights connected directly to the switch or through a Distributor will be controlled by that specific Wired Inline Switch.

Configuration 7: Using independent ports and controlled ports at the same time (1).

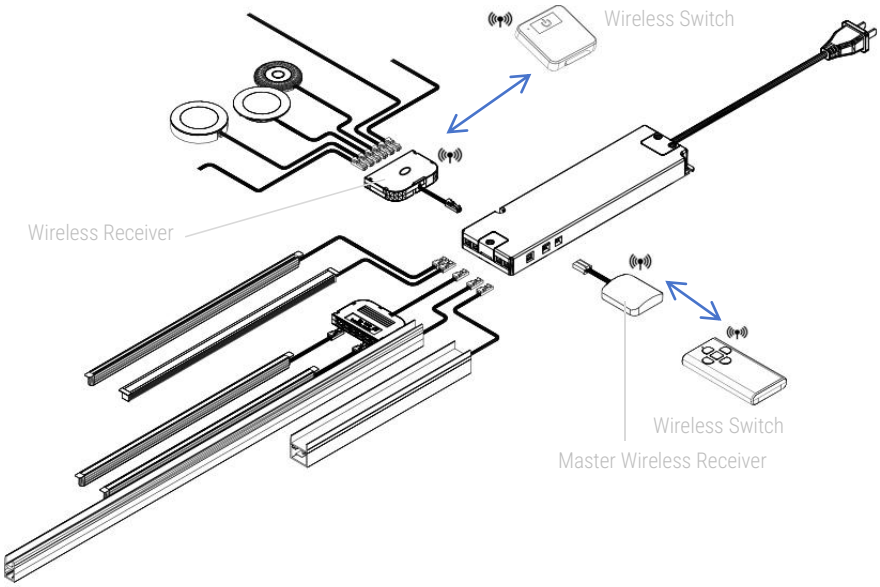


In this configuration, the "King" series LED Driver utilizes both independent and controlled output ports simultaneously.

- The controlled ports are connected to multiple LED lights, which are operated by a Wireless Switch via a Wireless Receiver.
- Meanwhile, an LED light with a built-in sensor functions independently, controlling itself based on sensor activation without being affected by the Wireless Switch.

This setup enables a hybrid lighting system, combining centralized control with autonomous sensor-based operation for enhanced flexibility and convenience.

Configuration 8: Using independent ports and controlled ports at the same time (2).

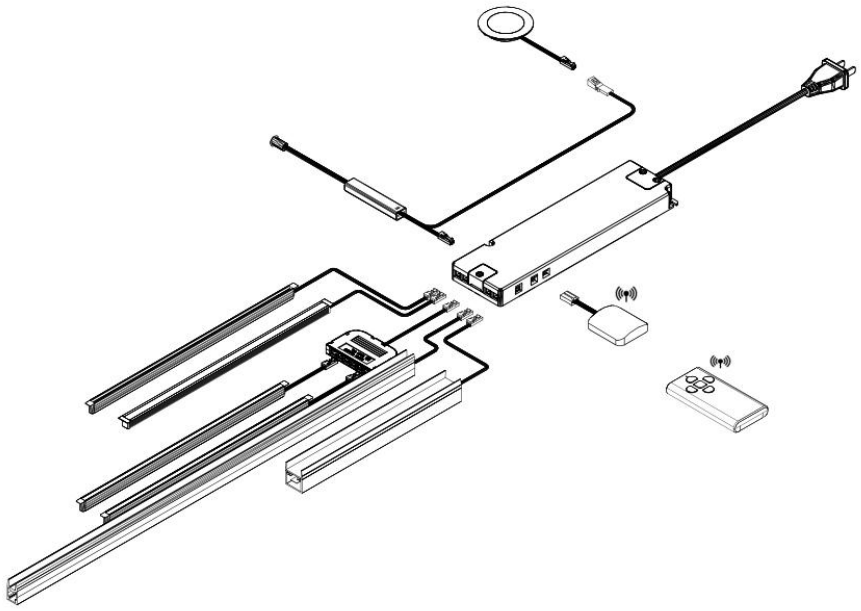


Similar to Configuration 7, the independent port can also be used to connect an Individual Wireless Receiver, enabling wireless control.

In this setup, you create two standalone wireless lighting systems, each operating independently while maintaining seamless functionality.

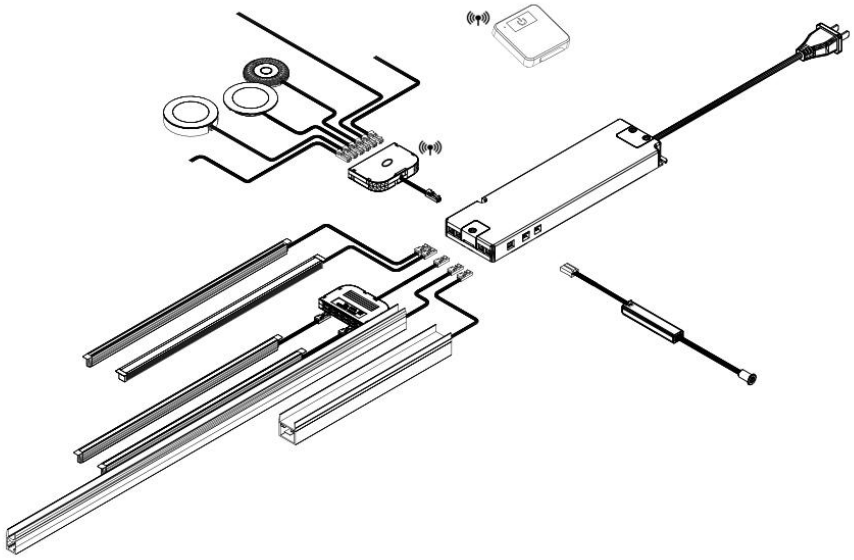
Note: Wired control systems work the same way as wireless control systems as shown above.

Configuration 9: Using wireless and wired control at the same time (1).



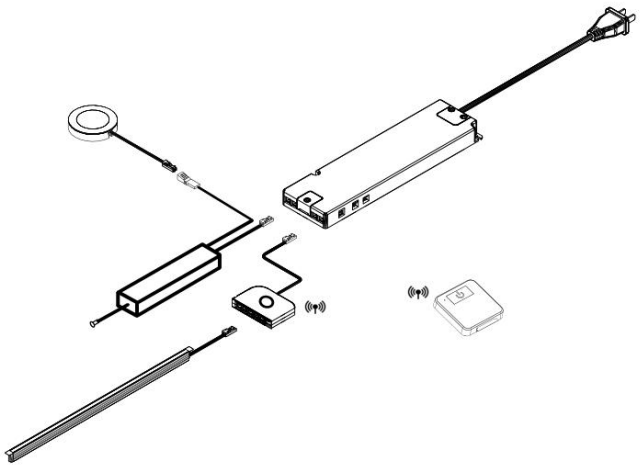
In this configuration, using wireless and wired control at the same time is enabled by using a Wireless Master Receiver for master control over the control ports, and Wired Inline Switch over the Independent ports.

Configuration 10: Using wireless and wired control at the same time (2).



In this configuration, using wireless and wired control at the same time is enabled by using a Wired Captain Switch for master control over the control ports, and Wireless Individual Receiver over the Independent ports.

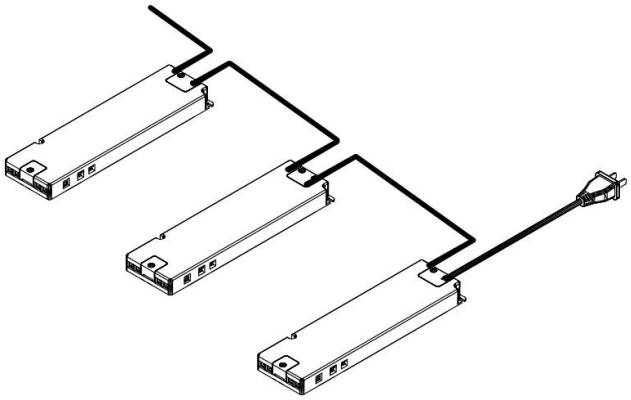
Configuration 11: Using wireless and wired control at the same time (3).



In this configuration, using wireless and wired control at the same time is enabled by using a Wired Inline Switch and Individual Wireless Receiver which are both connected to the controlled ports. These two types of devices can work separately and seamlessly.

The 4 or 6 controlled ports (depending on the model) can be used to connect a mix of Wired Inline Switches and Individual Wireless Receivers in any combination. Each device controls its respective lights without interfering with the others, ensuring flexibility and reliable operation.

Configuration 12: Link multiple LED Drivers (only power).



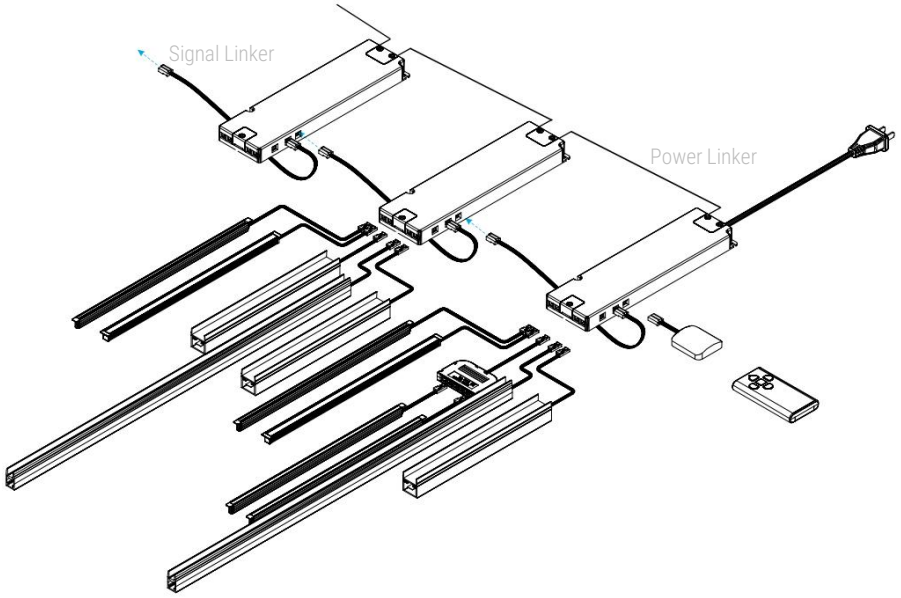
The Ariginal "King" series LED Driver is linkable, allowing multiple units to be connected with power linker cable for efficient power distribution. Maximum 20 LED Drivers can be linked together.

In this configuration, three Drivers are linked using A/C power cables:

- The first Driver is directly connected to mains power.
- The second Driver receives power from the first Driver.
- The third Driver receives power from the second Driver.

Each Driver operates independently, meaning it can be configured using any of the available setups to power and control lights according to specific requirements. This modular design enhances scalability, flexibility, and ease of installation.

Configuration 13: Link multiple LED Drivers (power and signal).



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 by using power linker AND signal linker.

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.

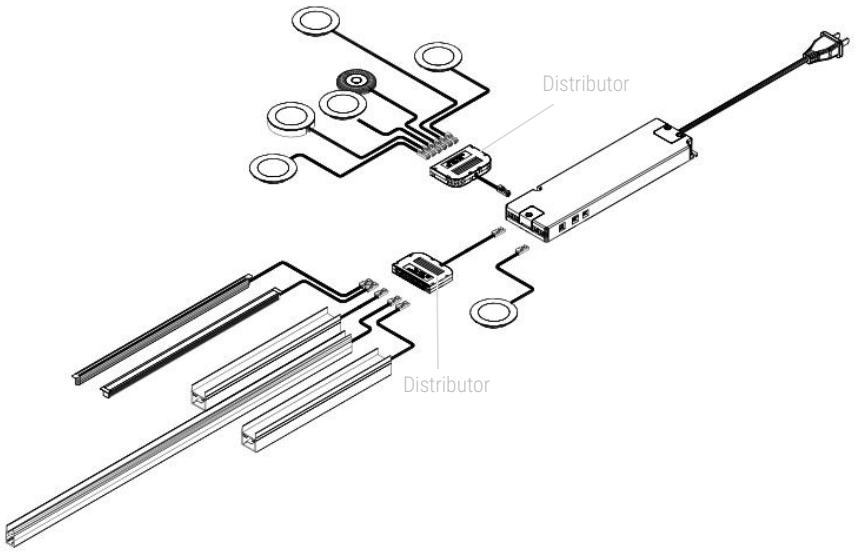
Configuration 14: Using Distributor.

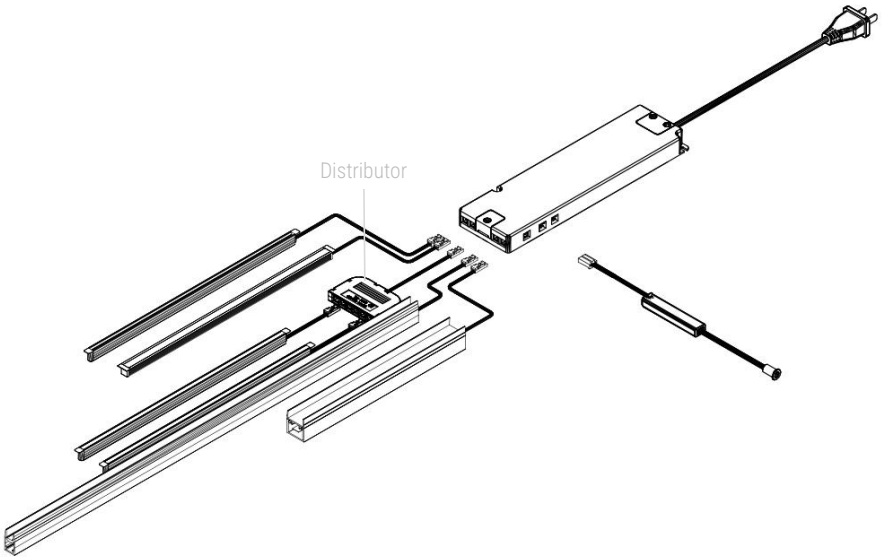
The Ariginal “Distributor” is a cost-effective yet powerful device designed to expand and distribute connections for various lighting components. It is widely used to multiply or extend connections for:

- LED lights
- Wired Inline Switches
- Individual Wireless Receivers
- Independent or controlled output ports of LED Drivers

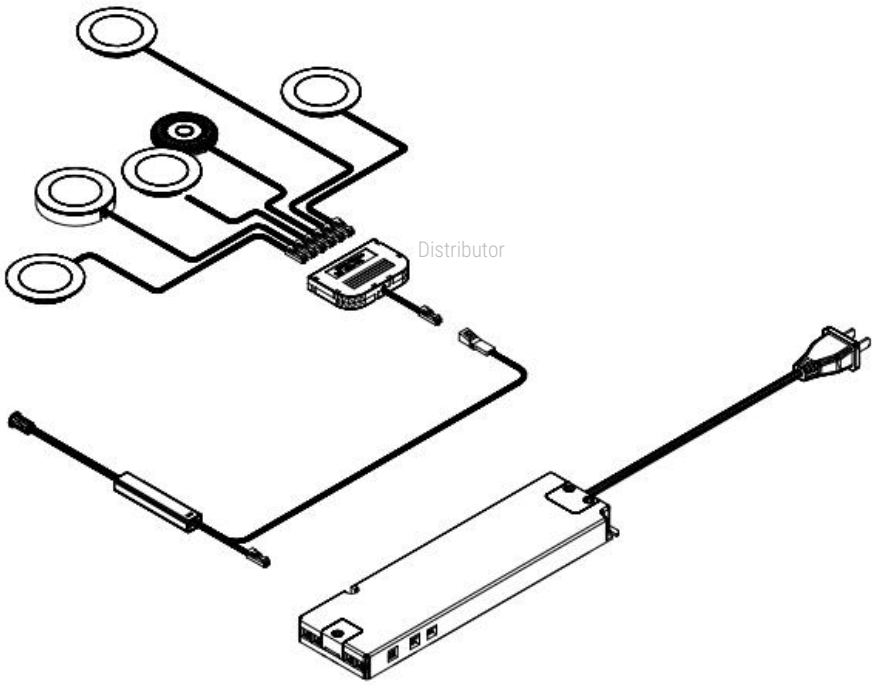
With its versatile functionality, the Distributor simplifies wiring, enhances system scalability, and ensures a seamless and efficient lighting setup.

Example 1: Using between LED Driver and Light Fixtures.

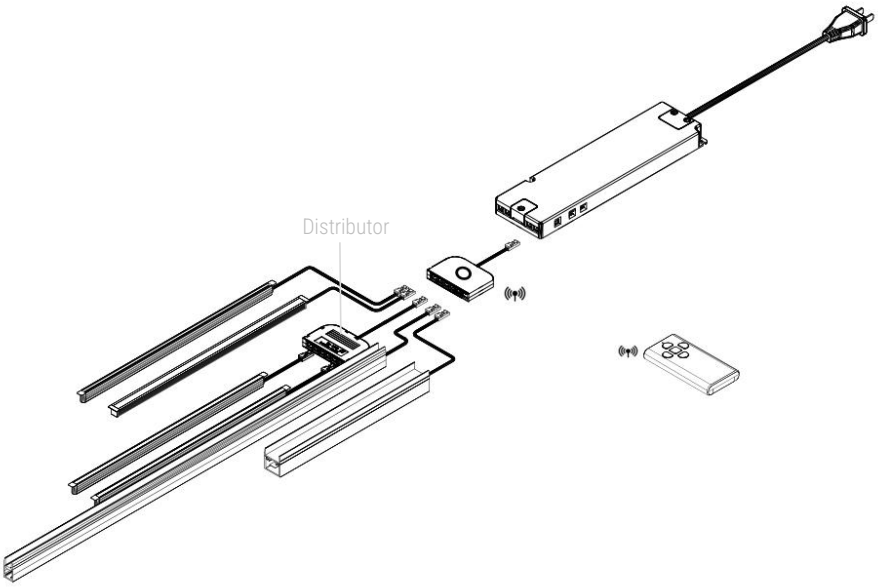




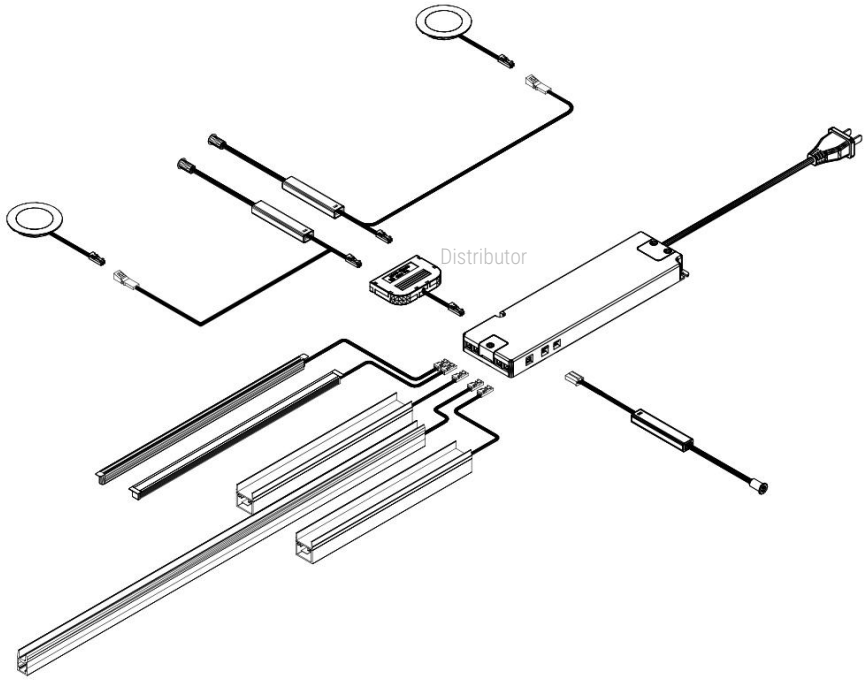
Example 2: Using between Wired Inline Switch and LED Lights.



Example 3: Using between Individual Wireless Receiver and Light Fixtures.



Example 4: Using between Independent Port and Inline Switches.



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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