

Project	SDE13	Catalog #		Type	SDE13
Prepared by		Notes		Date	2026.02.10

The SDE13 series is an innovative design that combines adjustable constant power and constant voltage outputs in one of the industry's most popular form factors. There are two variants in this series, 8-Watts and 16-Watts, flexible mechanical designs, and adopting the latest battery technologies to provide a reliable power source during an emergency situation. The innovative design to meet NFPA 101 requirements with maximum flexibility. In constant power mode, the adaptive mechanism supports a forward range between 20-400Vdc, making the SDE13 series the most compatible EM driver to all lighting boards. In constant-voltage mode, the output can be connected directly to the driver, which simplifies wiring, and 0-10V dimming controls power consumption. This is the design you should not miss!

## Features

- Constant power output
- Easy wiring: directly connect to AC INPUT OF LED Lights.
- DIP switch selectable features a versatile design that supports both adjustable constant power and constant voltage modes.
- Field or Factory Installation (Indoor and Damp)
- Built-in Lithium-ion battery.
- LED emergency converter that can transfer standard LED fitting into emergency LED fitting.
- Battery protections: over charge protection, over discharge protection, short circuit protection
- Ideal for various kinds 0-10V dimmable indoor LED lights  $\leq 60W$  or  $\leq 120W$  (Non 0-10v dimmable LED lights  $\leq$  EM Output Power)
- Self testing monthly/yearly
- Accessory test switch and charge indicator with Plenum Rated Cable
- Meet NEC, IBC, and NFPA 101 Life Safety Code
- UL Listed for US and Canada, Listed to UL924 and tested to CSA 22.2 No. 141
- Provide 12V auxiliary power supply
- Suitable for dry and damp locations
- RoHS Compliant

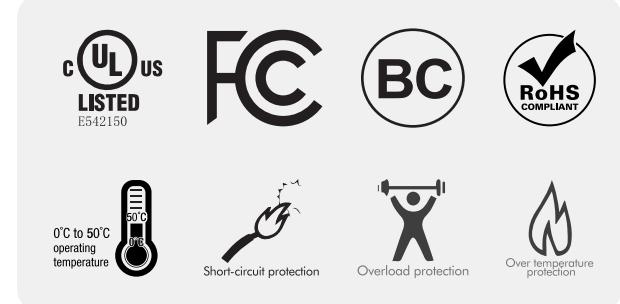
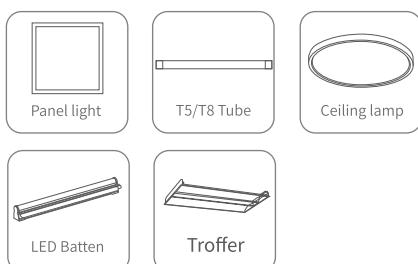
## Benefits

- New compact slim structure by Aluminum enclosure for space-limited LED applications.
- Versatile design, directly connect to AC INPUT OF LED Lights or Connect to LED Array/Module.
- Directly connect to AC Input of LED Fixtures. Saves Time and Money on the Jobsite
- Reduce SKU, the output voltage range is adaptive Vout 20-300Vdc, making it compatible with the forward voltage of most lighting boards, when select constant power mode to use connect to LED Array.
- Suitable for non-isolated Type A, Type B, Type AB LED Tube. No need to connect dimming lines of input and output sides.
- Listed to UL924. For Field or Factory Installation (Indoor and Damp)



## Applications

Widely used for indoor LED lighting products, such as Wall Pack, Canopy Light, Strip Linear.



## Specification

Model No.:	SDE013B-080A90L	SDE013B-160A90L
Rated supply voltage	100-2777Vac	100-277Vac
Output Voltage	20-300Vdc	20-300Vdc
Output Power	8W	16W
Battery Pack	7.2V 3.0Ah Li-ion	14.4V 3.0Ah Li-ion
Test Mode	Manual test and Self test	Manual test and Self test
Rated duration	>90min	>90min
Lifetime	up to 50,000H	up to 50,000H

## Parameter

Input voltage	120-277Vac, 50/60Hz
Input Current	100mA Max
Input power	6W Max
Power factor	8W: 0.8@120Vac, 0.3@277Vac, 16W: 0.9@120Vac, 0.5@277Vac
Output Voltage	Adaptive 20-300VDC or Fixed 170VDC
Output Power	8W, 16W, constant power
Battery Type	High-Temperature, Maintenance-Free Lithium Ion Battery; 8W: 7.2V/3000mAH 16W: 14.4V/3000mAH
Recharge current	0-240mA
Recharge time	≥24 Hours
Emergency Time	≥90 minutes
Luminaire Power	8W: 0-10V dim luminaries≤60W, Non 0-10V Dim luminaries≤8W; 16W: 0-10V dim luminaries≤120W, Non 0-10V Dim luminaries≤16W
Abnormal Protection	Over-load, Over-voltage, over-current, over-tem premature, short-circuit, and open-circuit protection and current limitationAmbient Temp.: 0°C ~50°C(32°F~122°F)
Ambient Temp	0°C - 50°C (32°F-122°F)
Case: Tc (max)	58°C
Lifespan	50000 hours
Warranty	5 Years

## Model Selection


**SDE13**

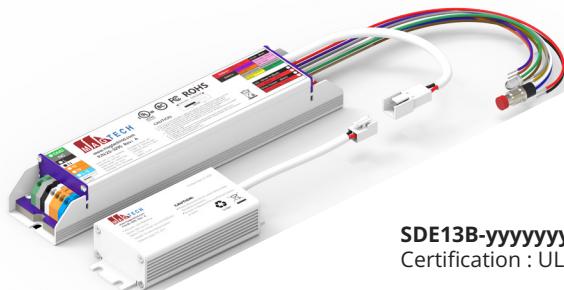
Certification : UL, BC, FCC

Model	Input Voltage	Output Wattage	Load Range	Output Voltage	Emergency Time	Batteries	Battery/ Inverter	Test Function	Dimension (L*W*H)
SDE13-080A090L	120 - 277VAC 50/60Hz	8W	LED Driver (Max 60W)	Fixed Vout 170Vdc or Adaptive Vout 20-300Vdc Switchable	>90min	7.2V3Ah Li-ion	Integrated (Built-in battery)	2in1 Manual + Self test	Inverter: 10.43" x 1.52" x 1.12"
SDE13-160A090L		16W	LED Driver (Max 120W)		>90min	14.4V3Ah Li-ion			Inverter: 13.18" x 1.52" x 2.12"


**SDE13B**

Certification : UL, BC, FCC

SDE13B-080A090L	120 - 277VAC 50/60Hz	8W	LED Driver (Max 60W)	Fixed Vout 170Vdc or Adaptive Vout 20-300Vdc Switchable	>90min	7.2V3Ah Li-ion	Integrated (Built-in battery)	2in1 Manual + Self test	Inverter: 11.89" x 1.52" x 1.12"
SDE13B-160A090L	100 - 347VAC 50/60Hz	16W	LED Driver (Max 120W)		>90min	14.4V3Ah Li-ion			Inverter: 14.57" x 1.52" x 1.12"


**SDE13B-yyyyyyyy-C**

Certification : UL, BC, FCC

SDE13B-080A090L-C	120 - 277VAC 50/60Hz	8W	LED Driver (Max 60W)	Fixed Vout 170Vdc or Adaptive Vout 20-300Vdc Switchable	>90min	7.2V3Ah Li-ion	Separate	2in1 Manual + Self test	Inverter: 11.89" x 1.52" x 1.12"
SDE13B-160A090L-C		16W	LED Driver (Max 120W)		>90min	14.4V3Ah Li-ion			Inverter: 14.57" x 1.52" x 1.12"

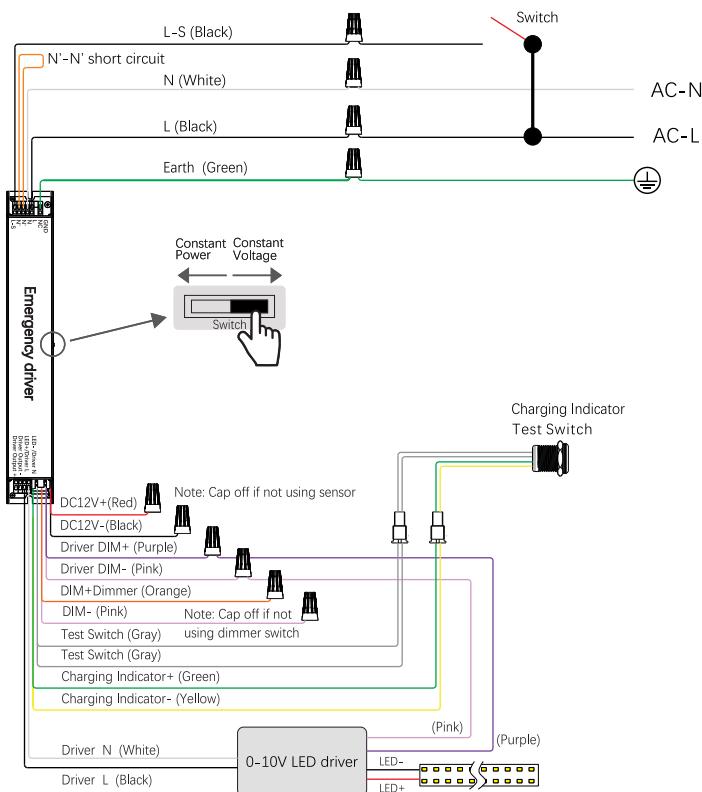

**SDE13B-yyyyyyyy-S**

Certification : UL, BC, FCC

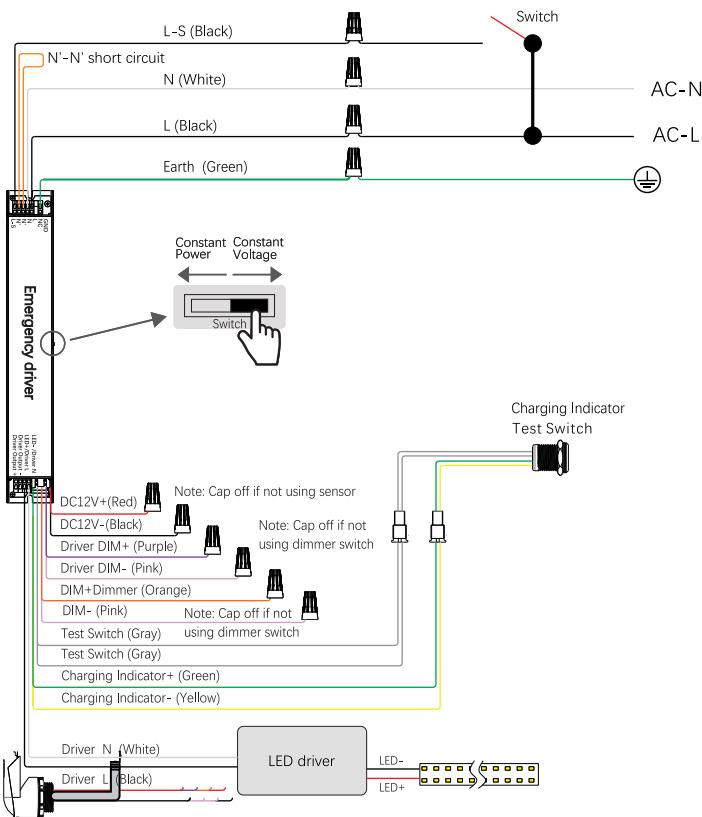
SDE13B-080A090L-S	120 - 277VAC 50/60Hz	8W	LED Driver (Max 60W)	Fixed Vout 170Vdc or Adaptive Vout 20-300Vdc Switchable	>90min	7.2V3Ah Li-ion	Separate	2in1 Manual + Self test	Inverter: 11.89" x 1.52" x 1.12"
SDE13B-160A090L-S		16W	LED Driver (Max 120W)		>90min	14.4V3Ah Li-ion			Inverter: 14.57" x 1.52" x 1.12"

## Wiring Diagram SDE13

Connected with LED Driver (Constant voltage)

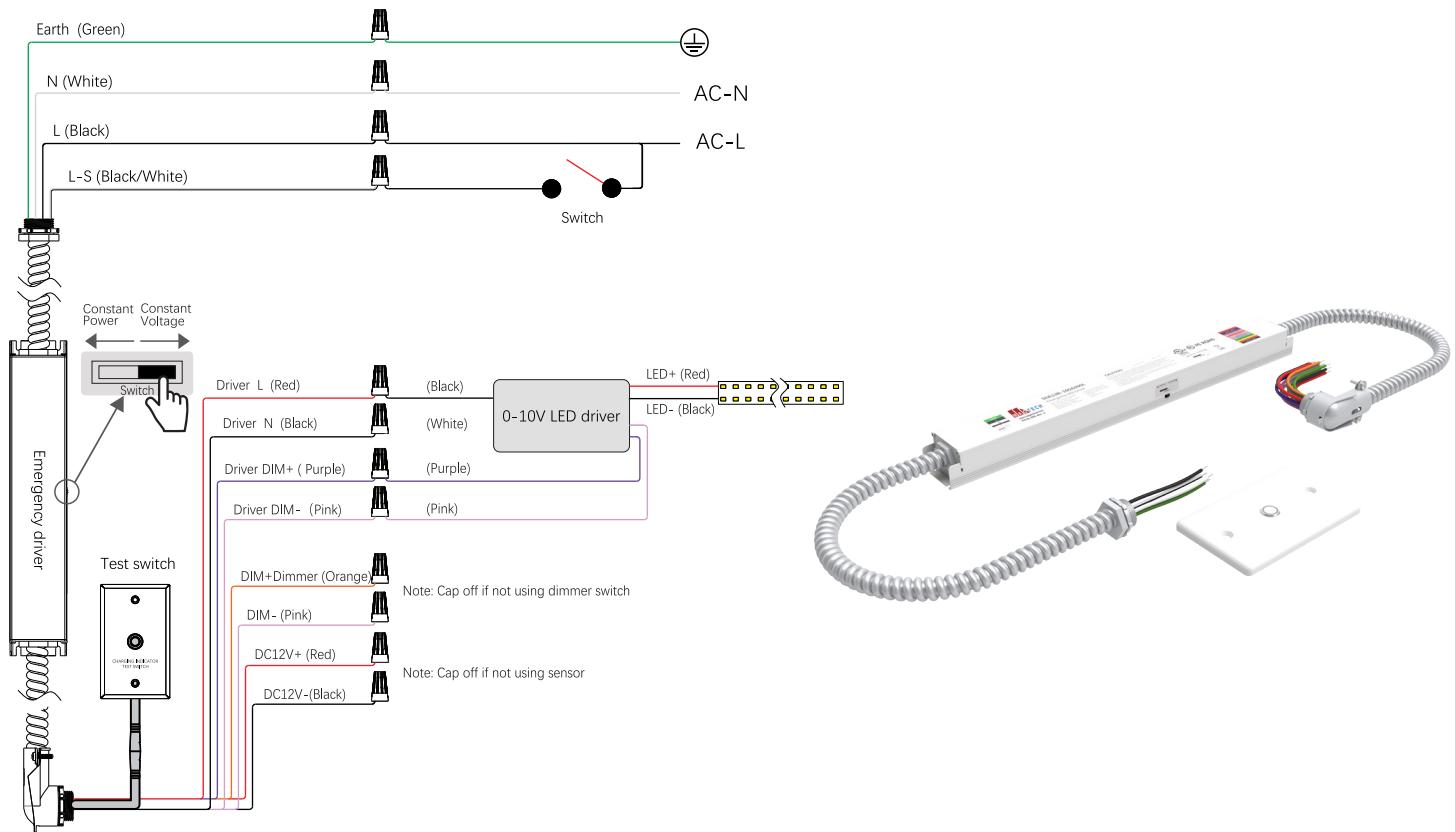


■ Connected with LED Driver (Constant Power)

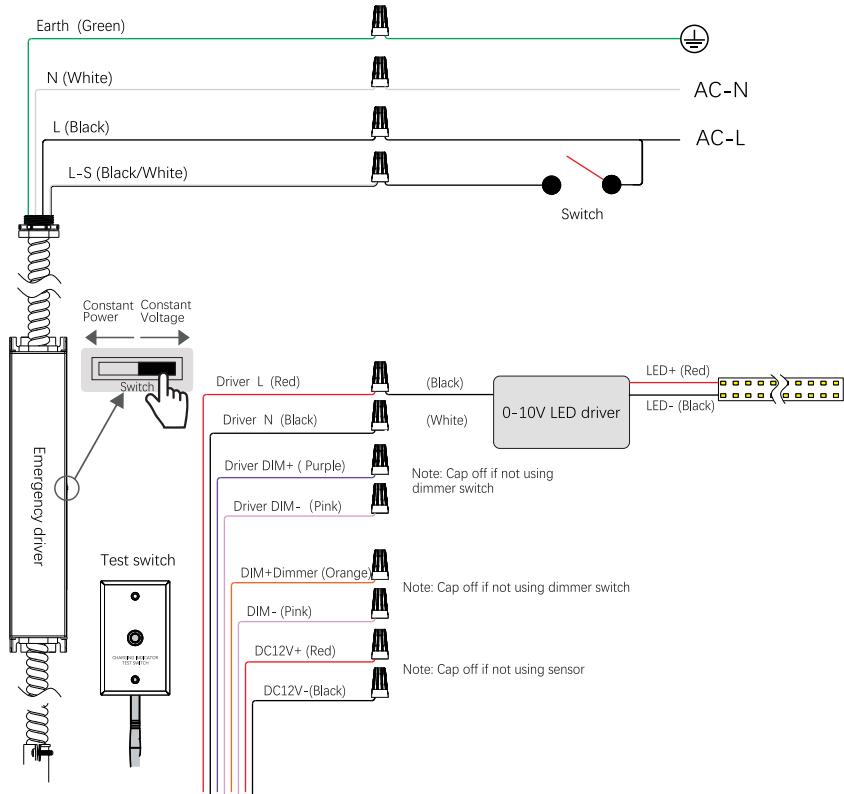


## Wiring Diagram SDE13B

### Connected with LED Driver (Constant voltage)

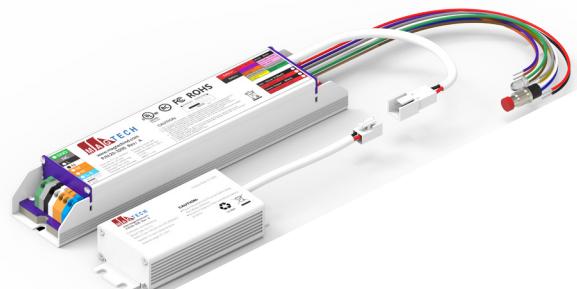
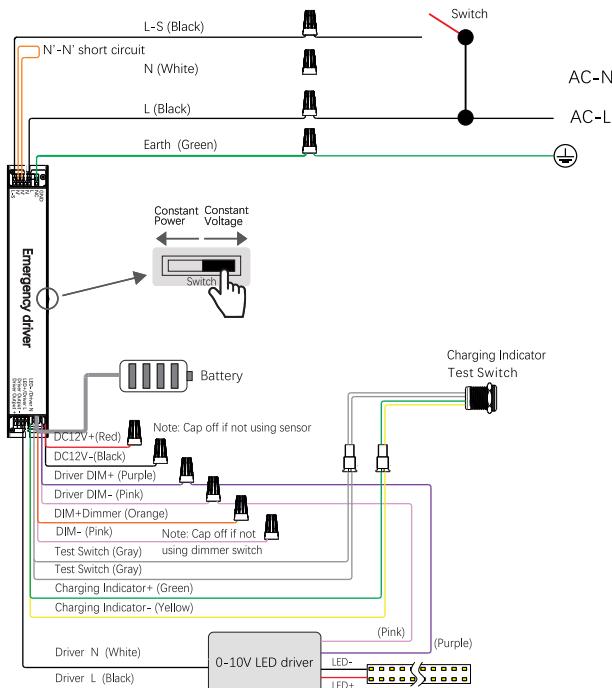


### Connected with LED Driver (Constant Power)

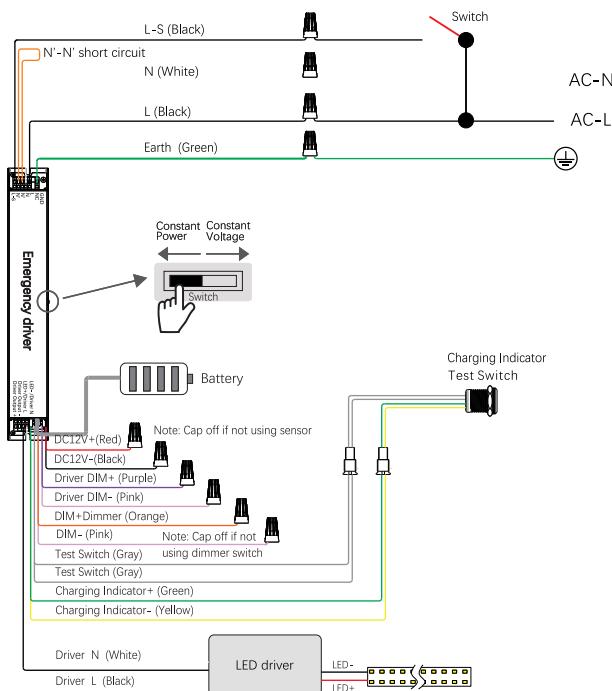


## Wiring Diagram SDE13B-C

■ Connected with LED Driver (Constant voltage)

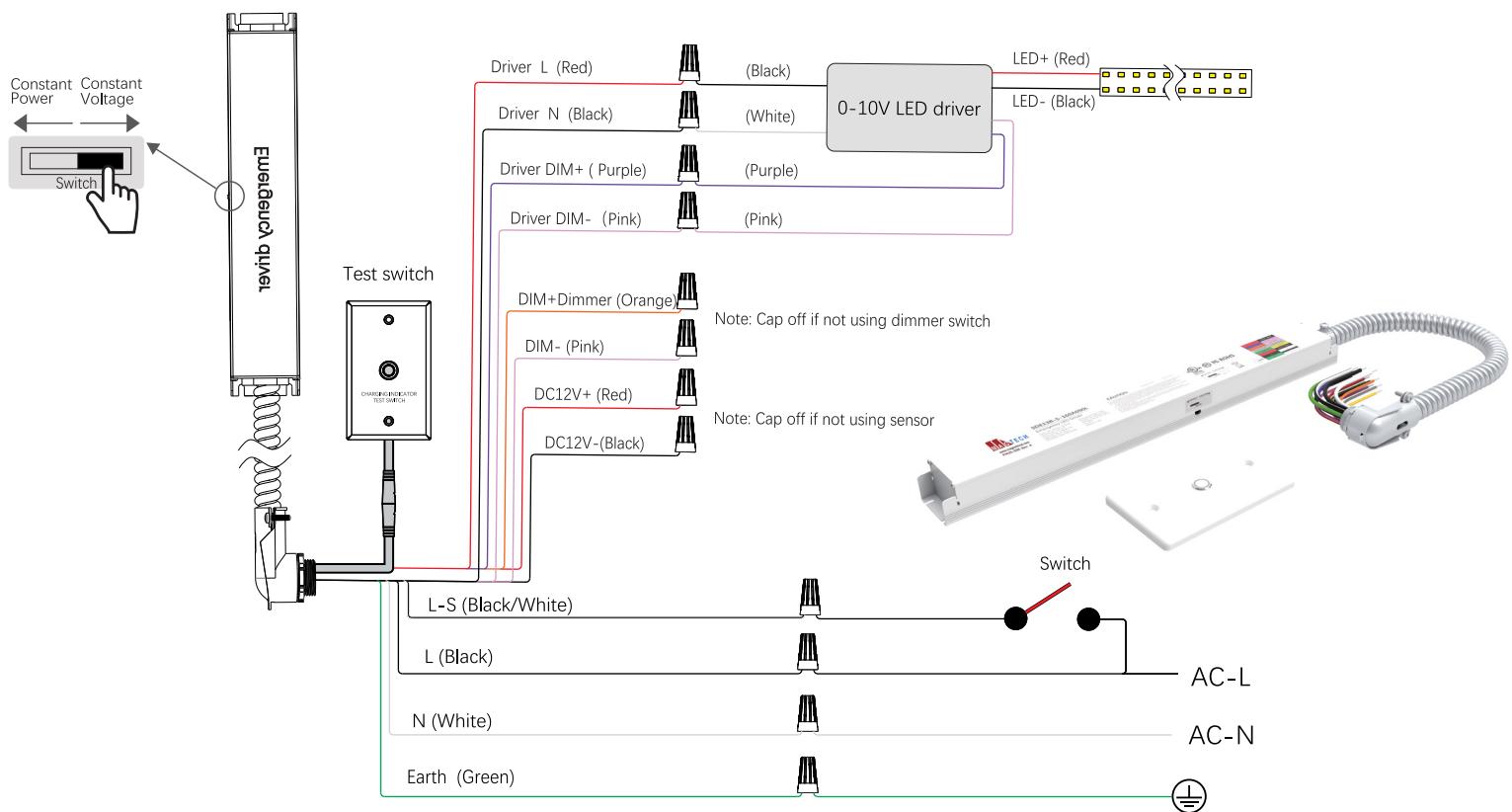


■ Connected with LED Driver (Constant Power)

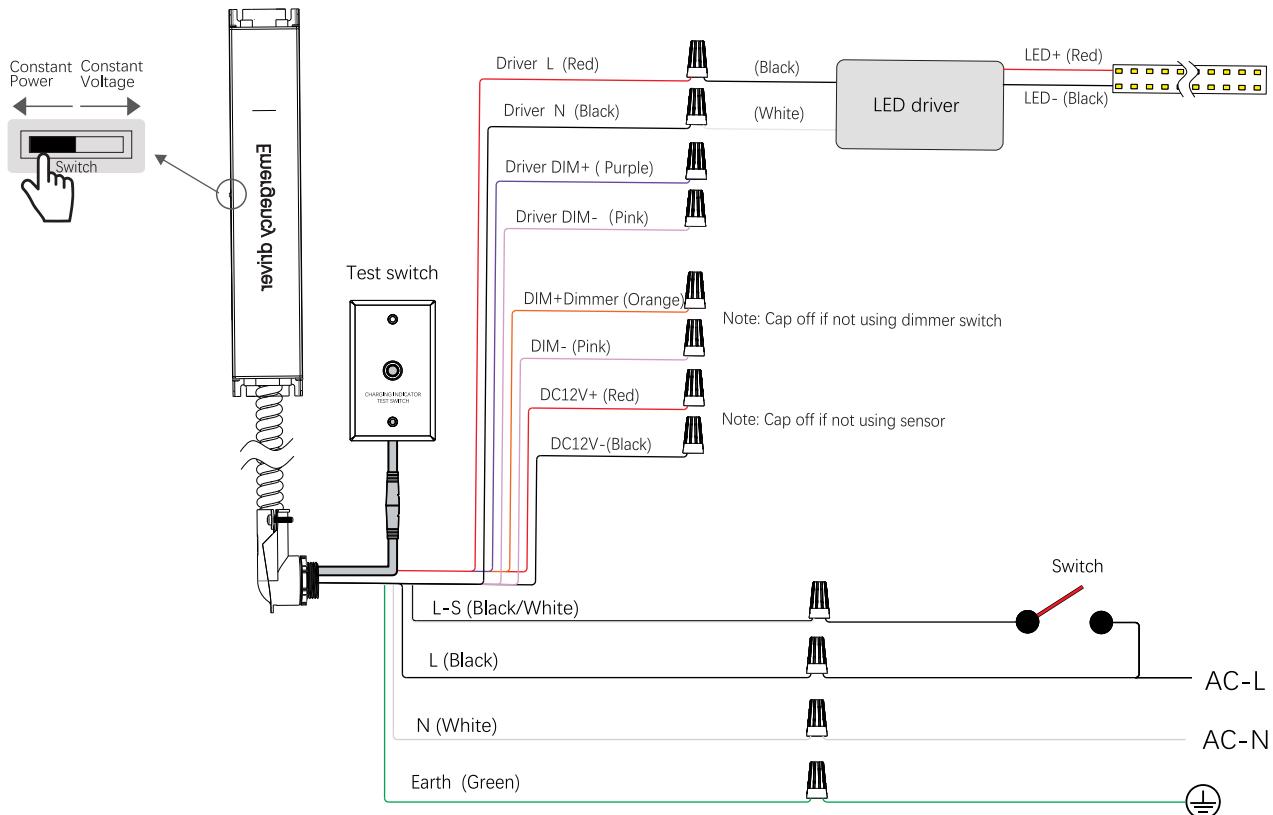


## Wiring Diagram SDE13B-S

### Connected with LED Driver (Constant voltage)

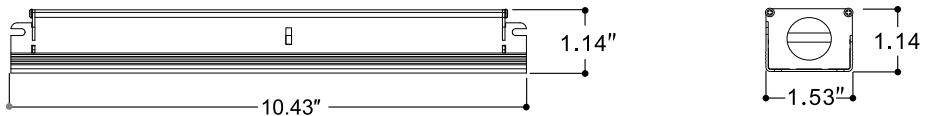


### Connected with LED Driver (Constant Power)



## Dimensions

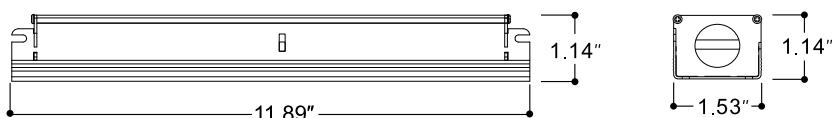
### SDE13-8W



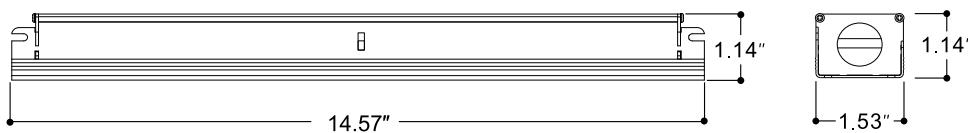
### SDE13-16W



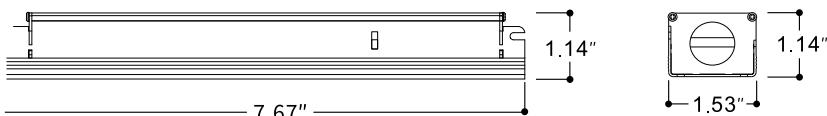
### SDE13B 8W



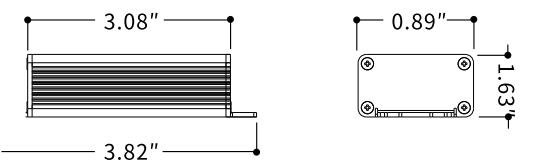
### SDE13B 16W



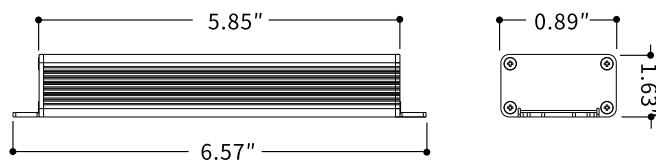
### SDE13C



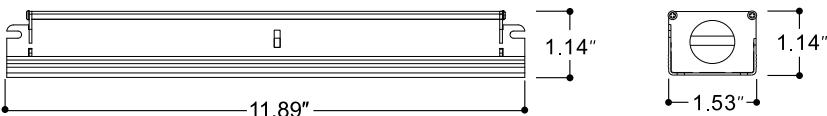
### Battery 8W



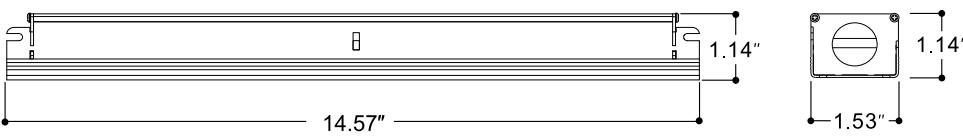
### Battery 16W



### SDE13B-S 8W



### SDE13B-S 16W



AC Operation: AC power is present. The AC driver operates the LED load as designed. The emergency driver is charging in a standby mode. The charging indicator light is flashing green, showing that the battery is charging.

Emergency Operation: When the AC power goes out, the emergency driver detects the AC power outage and automatically switch to the working emergency mode. The red LED Light on indicates that it is discharging. The red LED light off indicates that the discharge is complete. The LED luminaire is illuminated for a minimum of 90 minutes. When the AC power is restored, the emergency driver switches the system back to the Normal Mode and resumes battery charging.

Malfunction Operation: When the emergency LED Driver fault, the flashing red LED on.



## Indicator Light Introduction

Mode	LED Indicators Status	Error	EM Driver Status / Mode	Corrective Action
Normal Mode	Flashing Green 	None	Battery is charging/ Self-Diagnostic test underway	/
	Solid Green 	None	Battery fully charged / System OK	/
Emergency Mode	Solid Red 	None	In Emergency mode	/
Fault Mode	Flashing Red 	Overload protection		1. Check load power and connect 2. Check input and dimming line 3. Powered on again 4. Contact after-sales

## Manual Testing Switch



Test Mode	Description	Action	Status
Quick Test	Quick discharge test.	Press the test button twice in 1 second during normal lighting.	The light will switch to its emergency lighting and the indicator light flash green for 60 seconds till enter normal lighting.
Exit Test	Exit emergency mode test under the main supply is on.	Long press test button for 3 second under emergency mode test.	The light will recover to normal lighting.
Monthly Test	60-Second Test.	Press the test button twice in 1 second	LED indicator light will flash green and quick discharge for 60 seconds.
Annual Test	90-Minutes Test.	Press test button three time in 2second	LED indicator light will flash green and quick discharge for 90 mintues.
Sleep Mode	Enter Sleep Mode for Shipping consignment.	Long press test button for 3 second during emergency mode.	To Cut off the emergency output and enter shipping consignment.

\* Sleep Mode deactivates the unit and internally disconnects the battery to prepare the unit for storage prior to installation. The Automatic Power Activate feature will reactivate the unit upon installation and first power-up.

## Self-Test

Automatically tests emergency lighting for 60 seconds once a month and 90 minutes once a year.

This unit contains a control/monitor circuit that if enabled automatically performs a 60-second discharge test once a month and a full 90-minute discharge test once a year. During routine testing, the selftesting emergency driver simulates an AC power failure causing the unit to automatically switch to emergency mode. The unit will monitor the operation of the LED load, battery voltage, and emergency duration. If the emergency system functions properly, then the unit will return to normal mode. Should the unit detect any problems, the indicator light will flash Red.