



7-in-1, Single Channel 240W Constant Voltage Dimmer

The GRE Alpha 7-in-1 dimmer provides full range 0-100%, smooth, high resolution dimming performance for constant voltage LED dimming applications. Flexible and easy-to install, this unit comes with a multi-colored LED indicator and integrated strain relief cover. Dimming transfer characteristics can be set (linear or logarithmic) for a wide variety of dimming applications. Each unit also comes with built-in thermal shutdown with auto restart and overload protection.

XDL-7DV1-48V5A

7-in-1 Dimming LED Module



LED Controls supported

- DMX
- Switch Dim
- DALI
- 0-10VDC
- Wide range DC input : 8-48V
- 1-10V
- Variable Resistor (Potentiometer)
- PWM

Applications

- Linear LED Lighting
- Constant Voltage Lighting Applications
- Lighting Controls
- Smart Lighting

Model	Input Voltage Range (Vdc)	Output Voltage Range *	Max. Output Current (A) **	Max Output Power (W)	Power Efficiency (Typ)
XDL-7DV1-48V5A-E/ XDL-7DV1-48V5A-J	8 - 48V	Vin-0.2~0.5V	5	240	97%

*- XDL-7DV1-48V5A dimming module requires an external CV LED driver with voltage ripple <10% of rated output voltage, connected to the DC input, and should not exceed the above input voltage range. It is recommended to use with GRE Alpha's XLD/SLD/GLV type LED drivers.

Input Specification

Voltage Range	8-48Vdc	Dimmable Input Voltage Range	5 A max
Over Voltage Protection	@Vin=50V	Dimming Range	0-100%(Linear or Logarithmic curve selectable)
Recommended input wire length	Max 3m		

Output Specification

Output Voltage	Vin - 0.2~0.5V	Output Current	5A max
Power Efficiency	≥97%@ 100% Dimming	Max. Output Power	240W(48V,5A)
Over Current Protection	110% Iout(Max)	Over Temperature Protection	Power MOSFET@105°C
PWM Frequency	750Hz	Recommended LED output wire length	up to 30m*
Standby Power	200mW(Max)	Other Protection Modes	Thermal shutdown with auto restart overload protection

* --Depends on LED specification

Environmental Specification

MTBF	Cooling	Max Case Temp	Operating Temp	Storage Temp
55,000 Hours @ 25°C full load	Convection	60°C	-25°C - 40°C @ Full load	-25°C - 85°C








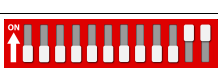
Compliance/Safety



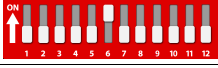

Safety Standards:	US Standard : UL/CUL 8750 compliance, FCC part 15 ClassB EU Standard: CE & CB, included EMC & EMI- EN55015, IEC61558-1, SELV, IEC 61347-2-13 Dimming Standard: IEC62386-101, 102 and 207
Weatherability:	IP 20



Mechanical Specification

Unit Dimensions	123*46*19.6mm
Case Design/Material	Polycarbonate White
Connector Type	Terminal block connectors
Connectors	Vin+, Vin-, DALI/PWM x 2, -Grey, +Purple, LED+, LED-, DMX IN x 3, DMX OUT x 3
Wire Size	24-16 AWG(0.25-1mm ²)

DIP Switch Settings – Operation Mode

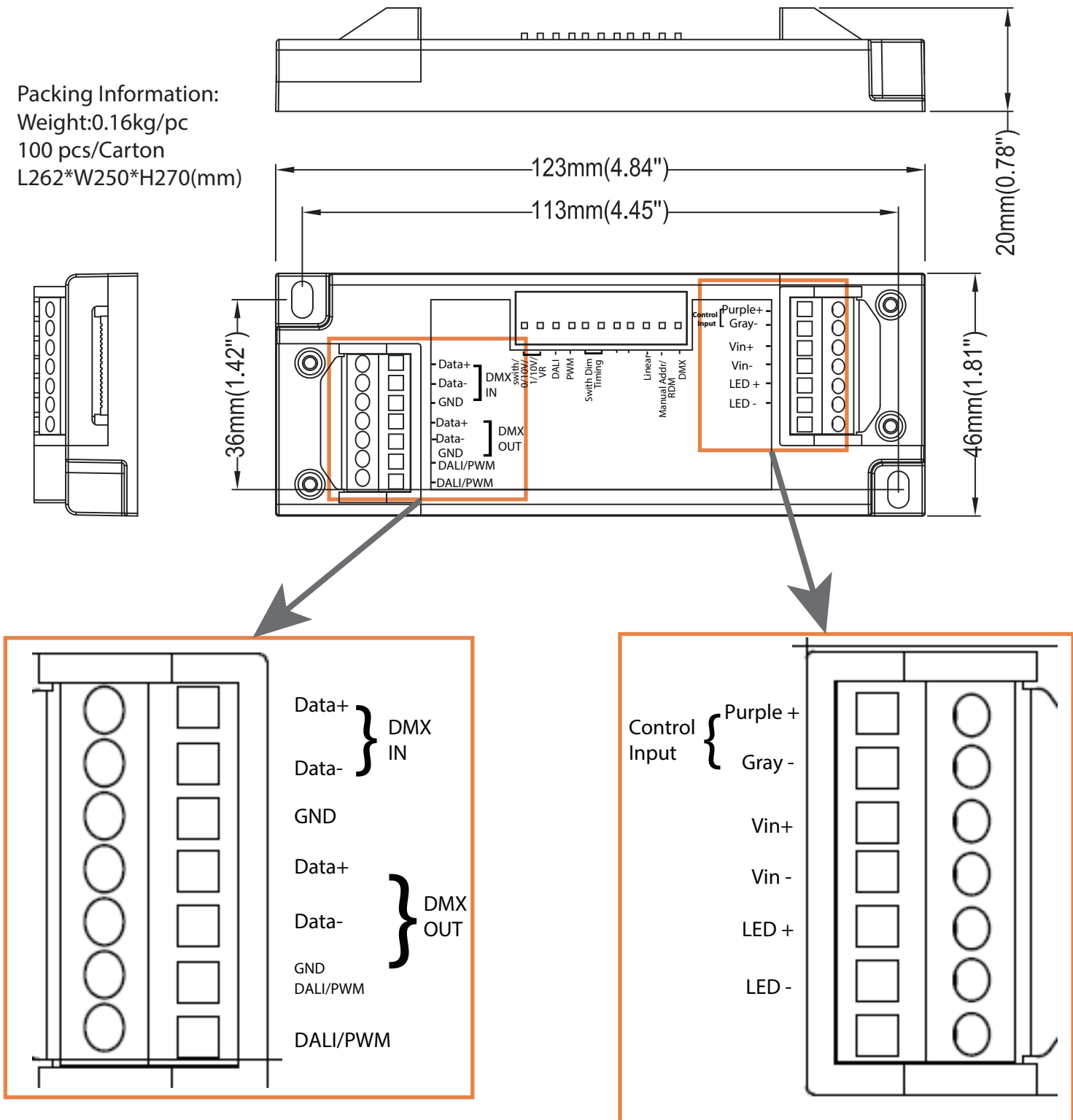
Mode	Setting	Option
Switch		<ul style="list-style-type: none"> Four timing durations selectable Linear or logarithmic dimming selectable
0-10V		<ul style="list-style-type: none"> N/A
1-10V		<ul style="list-style-type: none"> N/A
VR		<ul style="list-style-type: none"> N/A
DALI		<ul style="list-style-type: none"> N/A
PWM		<ul style="list-style-type: none"> N/A
DMX		<ul style="list-style-type: none"> Manual addressing mode <ul style="list-style-type: none"> DIP 1-9 for setting DMX address manually Linear or logarithmic dimming selectable
		<ul style="list-style-type: none"> RDM mode Linear or logarithmic dimming selectable

Switch Timing Options	Description
	Dimming duration: 4 seconds
	Dimming duration: 5 seconds
	Dimming duration: 7 seconds
	Dimming duration: 9 seconds

Dimming Curve Option	Description
	Linear
	Logarithmic

Mechanical Diagram

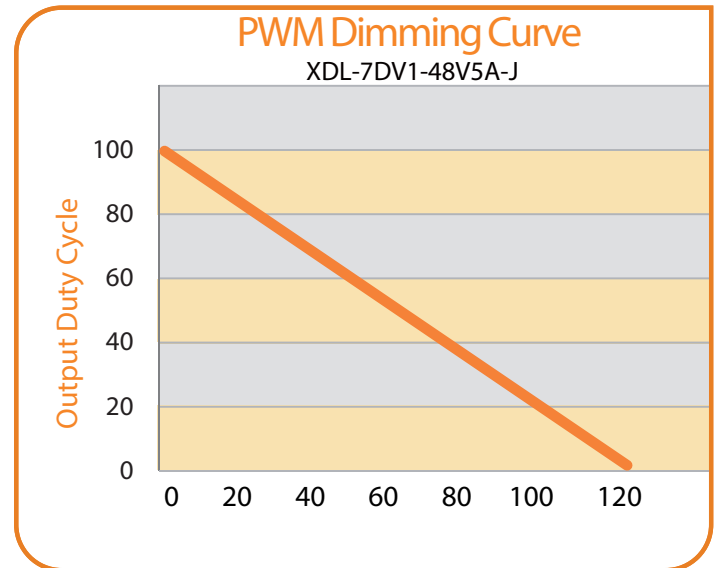
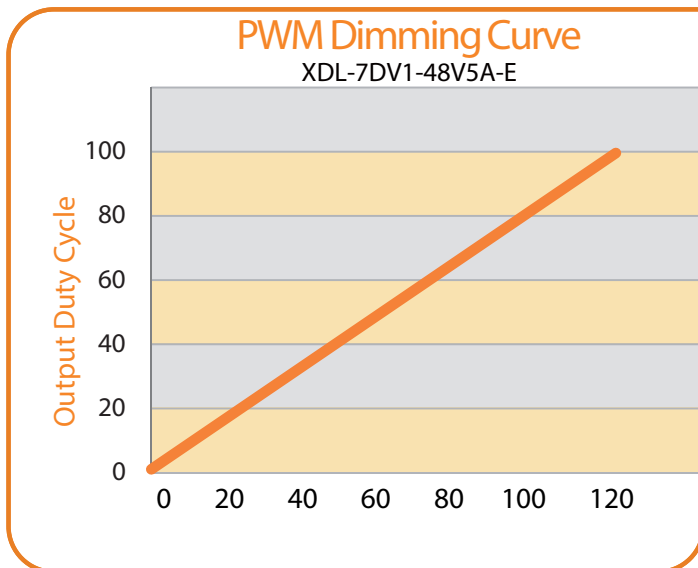
Packing Information:
Weight:0.16kg/pc
100 pcs/Carton
L262*W250*H270(mm)



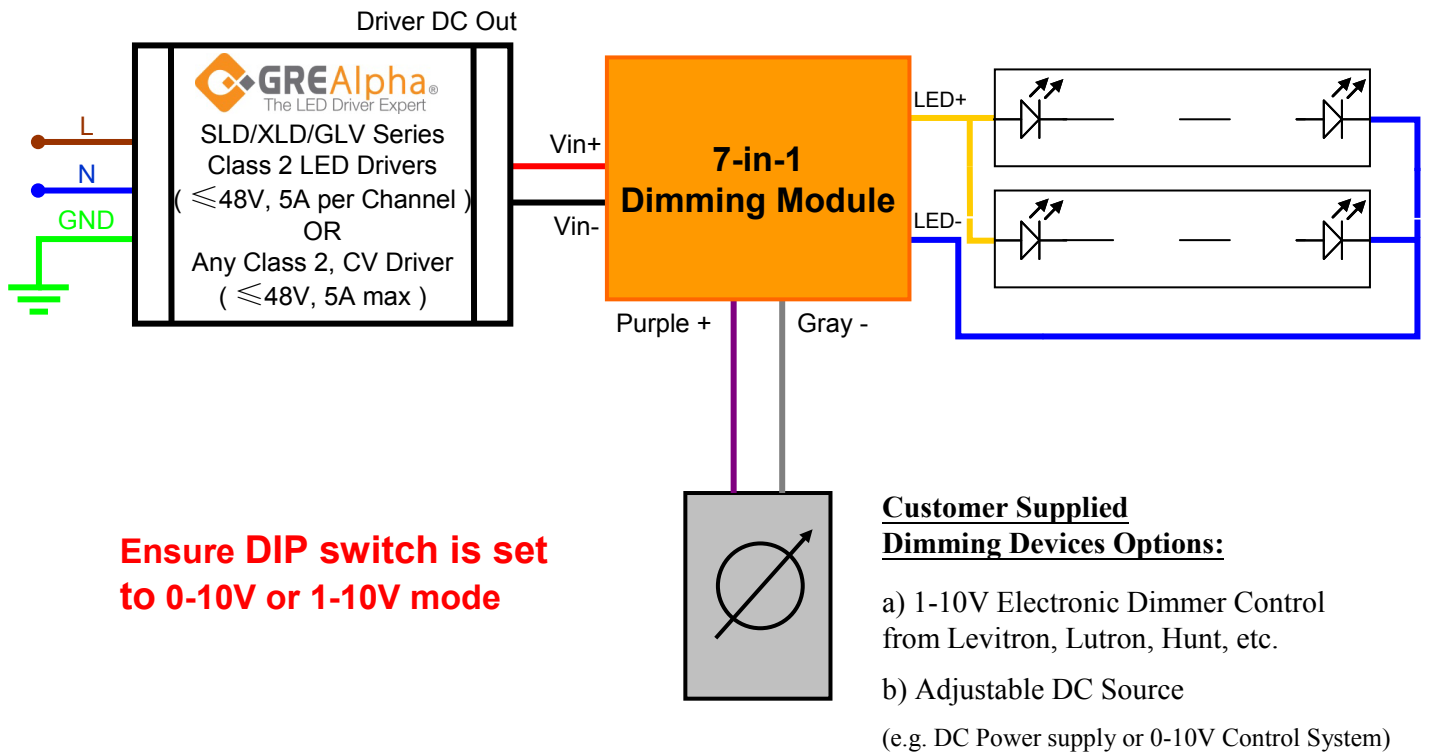
LED Status

LED Status	Mode	Description
Green ON	All	Normal / Ready
Green flashing	DALI	Communication in progress
Red ON	All	OCP / OVP/ OTP/ UVP
Red flashing	All	Incorrect DIP

Performance Curves

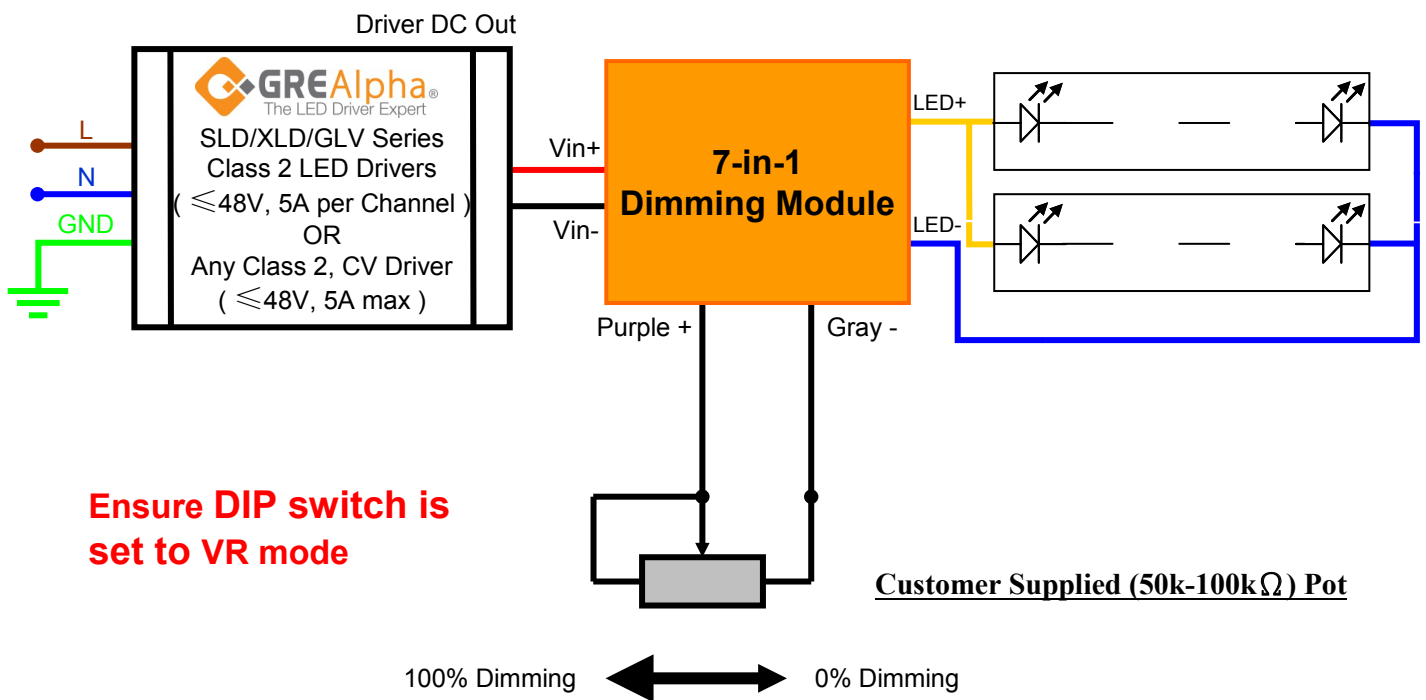


Wiring Diagrams



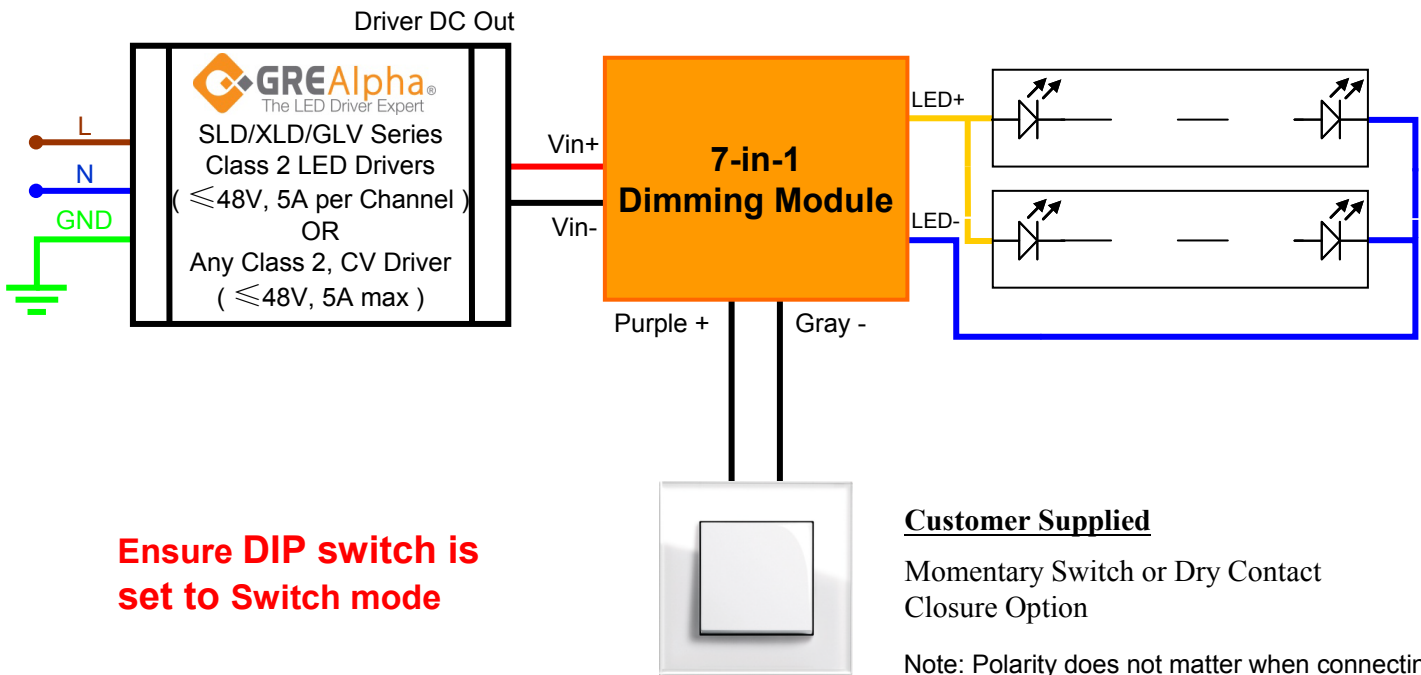
** Note alternate simple on-off operation:
- Connecting the Purple and Grey output together will provide 0% brightness.
- Leave Purple and Grey output open will provide 100% brightness.

0/1-10V



** Note alternate simple on-off operation:
- Connecting the Purple and Grey output together will provide 0% brightness.
- Leave Purple and Grey output open will provide 100% brightness.

VR



Ensure DIP switch is set to Switch mode

Customer Supplied

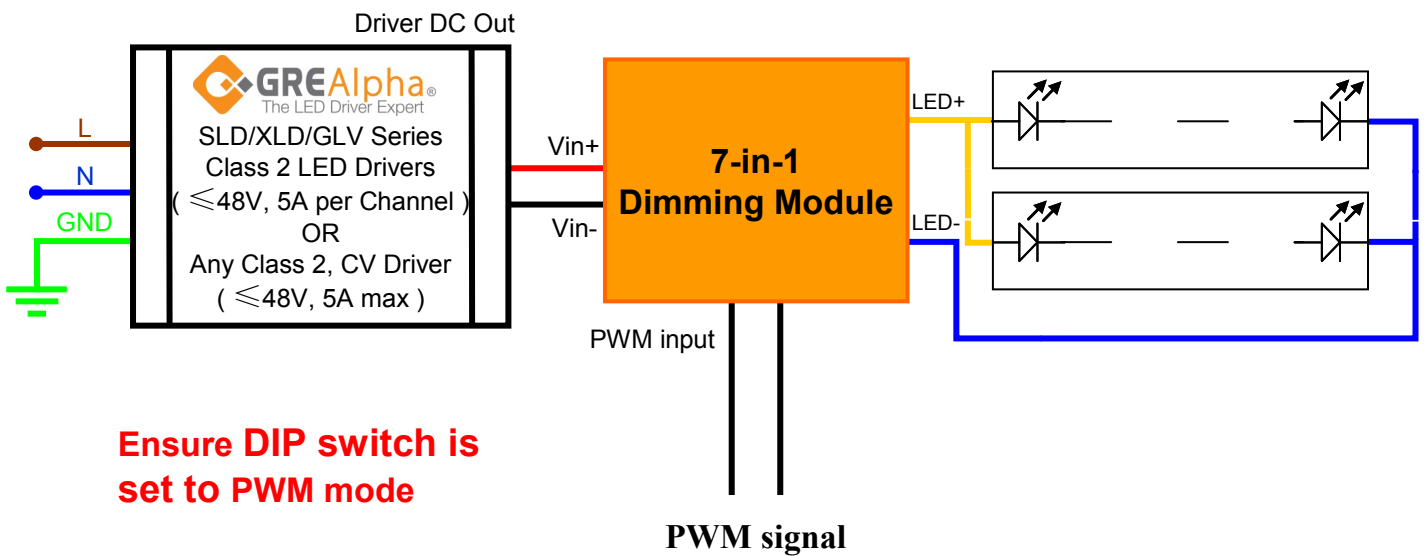
Momentary Switch or Dry Contact Closure Option

Note: Polarity does not matter when connecting purple and gray wires to momentary switch/dry contact.

** Note alternate simple on-off operation:

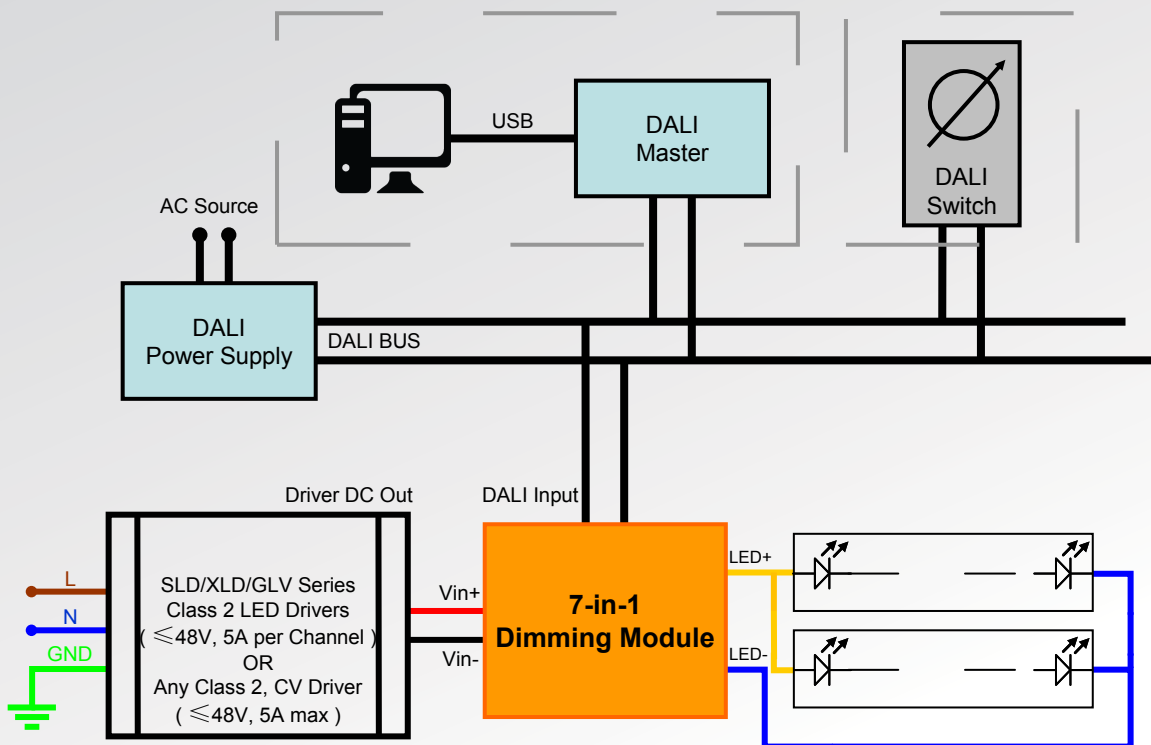
- Connecting the Purple and Grey output together will provide 0% brightness.
- Leave Purple and Grey output open will provide 100% brightness.

Switch Dim



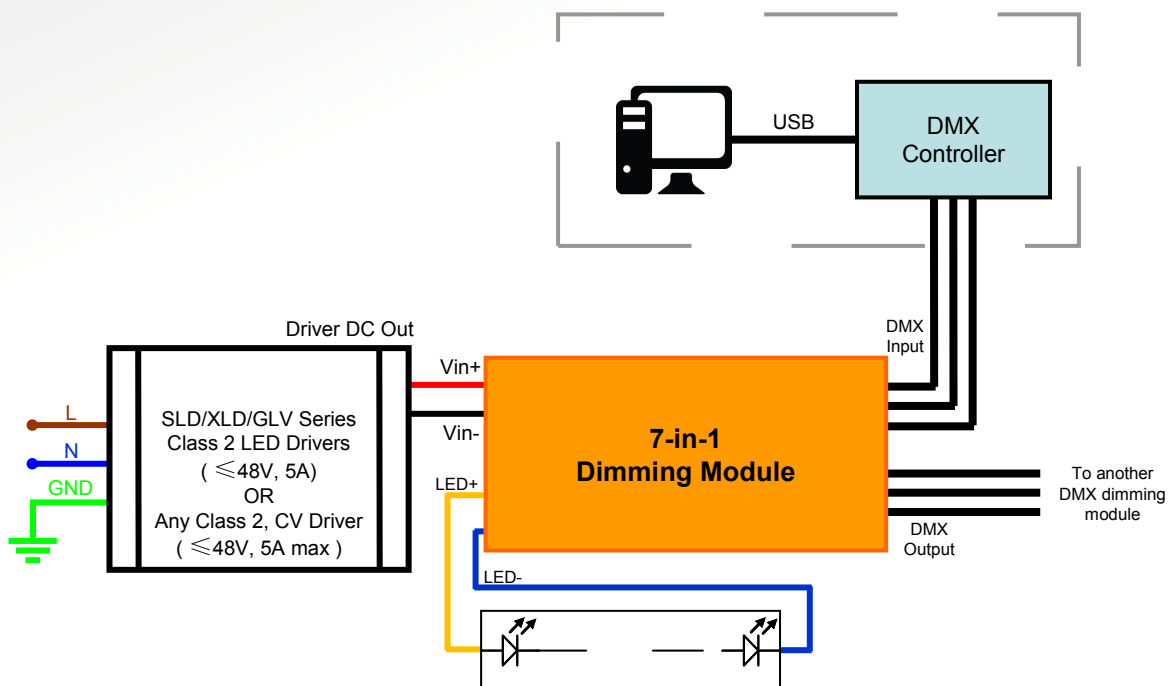
Ensure DIP switch is set to PWM mode

PWM



DALI

Ensure DIP switch is set to DALI mode



DMX

Ensure DIP switch is set to DMX mode

GRE Alpha undertakes extensive testing on its dimming modules to ensure dimming compatibility and performance to our best ability. However due to rapidly evolving technology and the wide number of dimmers available GRE Alpha makes no specific recommendations on dimming system selection for its dimming modules and there are no warranties of performance or compatibility implied. Please test product for dimming compatibility before use.

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