

## 6-in-1, Single Channel 240W Constant Voltage Dimming Module

The GRE Alpha 6-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 and terminal 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.

### LED Controls supported

- 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

# XDL-6DV1-48V5A-E

## 6-in-1 Dimming LED Module



Model	Input Voltage Range (Vdc)	Output Voltage Range *	Max. Output Current (A) **	Max Output Power (W)	Power Efficiency (Typ)
XDL-6DV1-48V5A-E	8 - 48V	Vin-0.2~0.5V	5	240	97%

\*- XDL-6DV1-48V5A-E 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
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

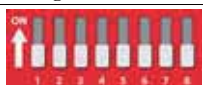


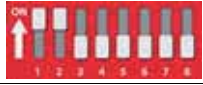
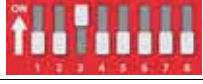

## Compliance/Safety

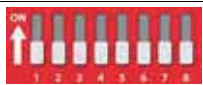


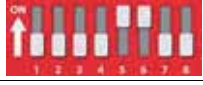


Safety Standards:	US Standard : UL/CUL 8750 compliance, FCC part 15 ClassB EU Standard: CE & CB, included EMC & EMI- EN55015, IEC61558-1, SELV, IEC 61347-2-13 Dimming Standard: IEC62386-101, 102 and 207
Weatherability:	IP 20

## Mechanical Specification

Power Unit Dimensions	153mm (L) x 23.5mm (W) x 24.5mm (H)
Case Design/Material	Plastic Casing
Connector Type	WAGO terminal block connectors
Connectors	Vin+, Vin-, DALI/PWM x 2,-Grey,+Purple, LED+, LED-
Wire Size	24-16 AWG(0.25-1mm <sup>2</sup> )

## Pin Assignment

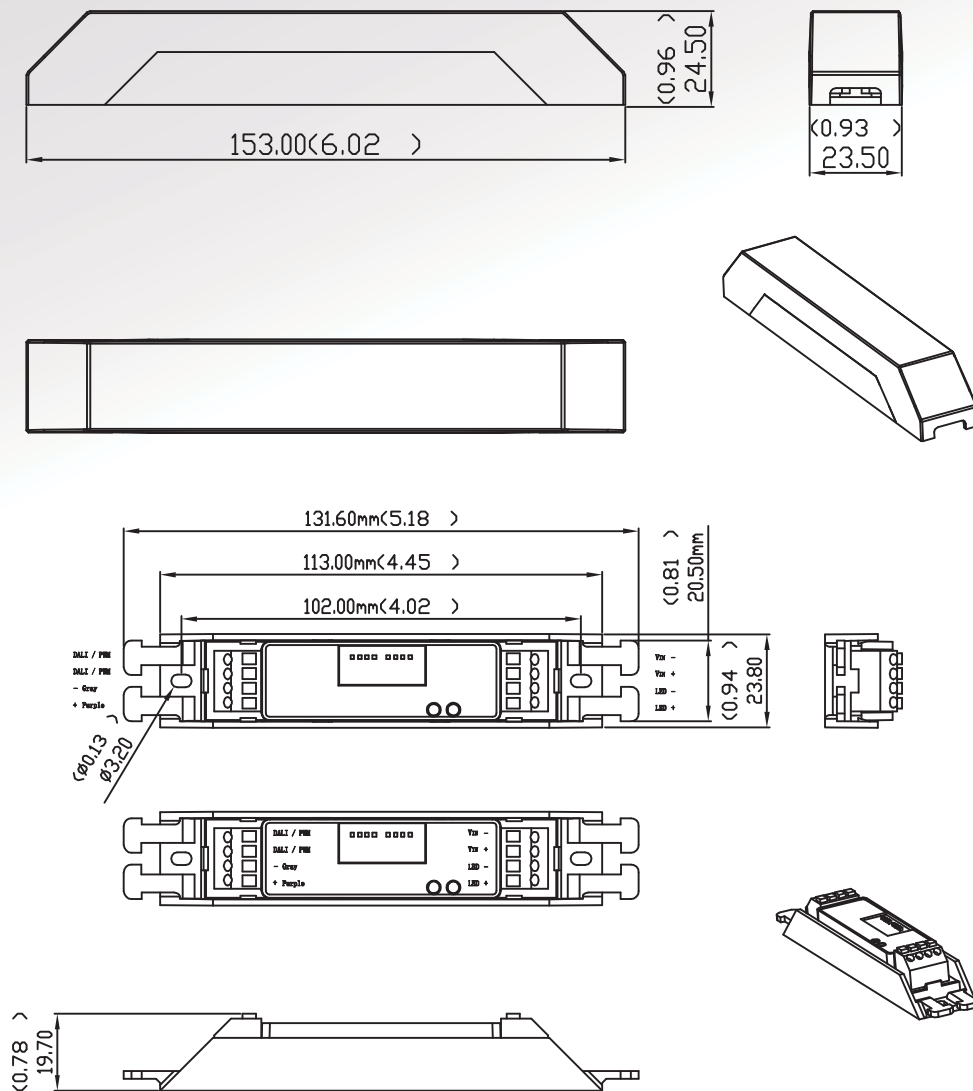
Mode	Setting	Option
Switch		<ul style="list-style-type: none"> <li>Four timing durations selectable</li> <li>Linear or logarithmic dimming selectable</li> </ul>
0-10V		<ul style="list-style-type: none"> <li>N/A</li> </ul>
1-10V		<ul style="list-style-type: none"> <li>N/A</li> </ul>
VR		<ul style="list-style-type: none"> <li>N/A</li> </ul>
DALI		<ul style="list-style-type: none"> <li>Linear or logarithmic dimming selectable</li> </ul>
PWM		<ul style="list-style-type: none"> <li>N/A</li> </ul>

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

## LED Status

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

## Mechanical Diagram



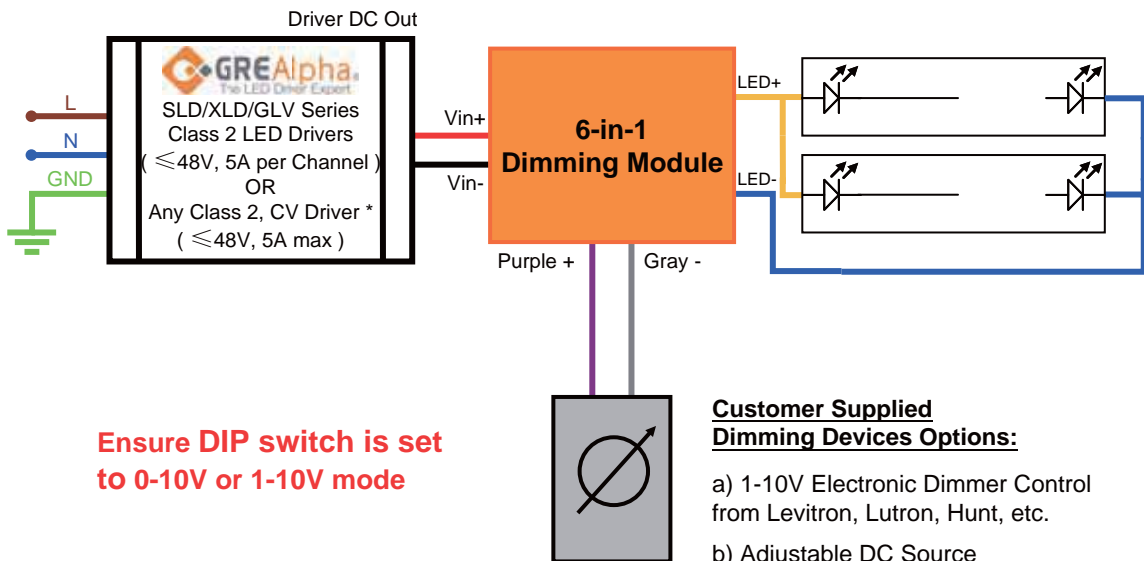
### Packing Information:

0.05kg/pcs; 100pcs/ carton;

7.0kg/carton; L330xW315xH190 (mm)

## Wiring Diagrams

DIP switch is set to 0-10V OR 1-10V mode

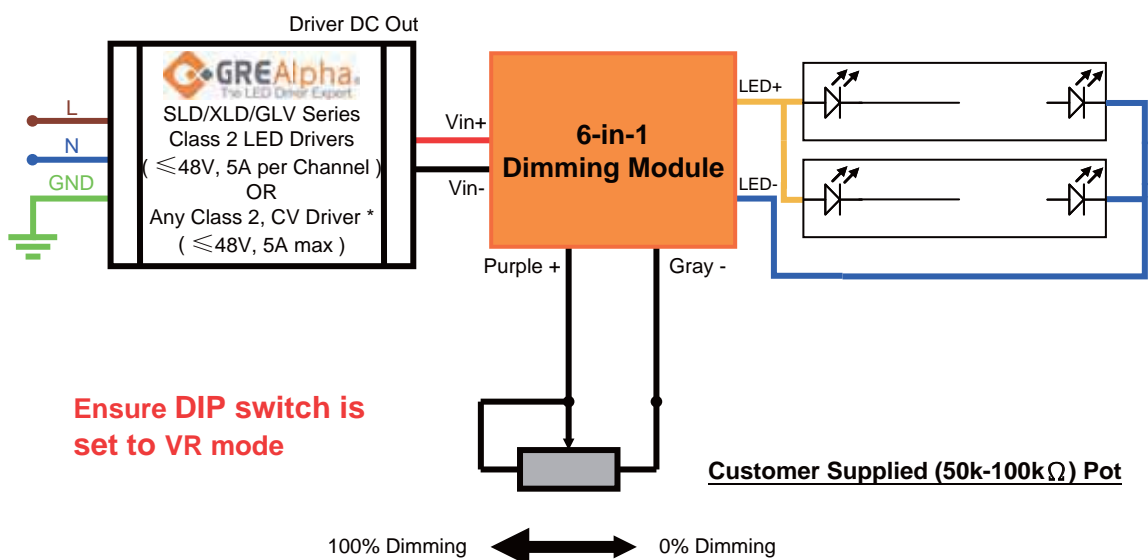


\*\* Note alternate simple on-off operation:  
 - Connecting the Purple and Grey output together will provide 0% brightness.  
 - Leave Purple and Grey output open will provide 100% brightness.

\* 0-100% flicker-free performance not guaranteed when used with non-GRE Alpha CV Drivers

**0/1-10V**

DIP switch is set to VR mode

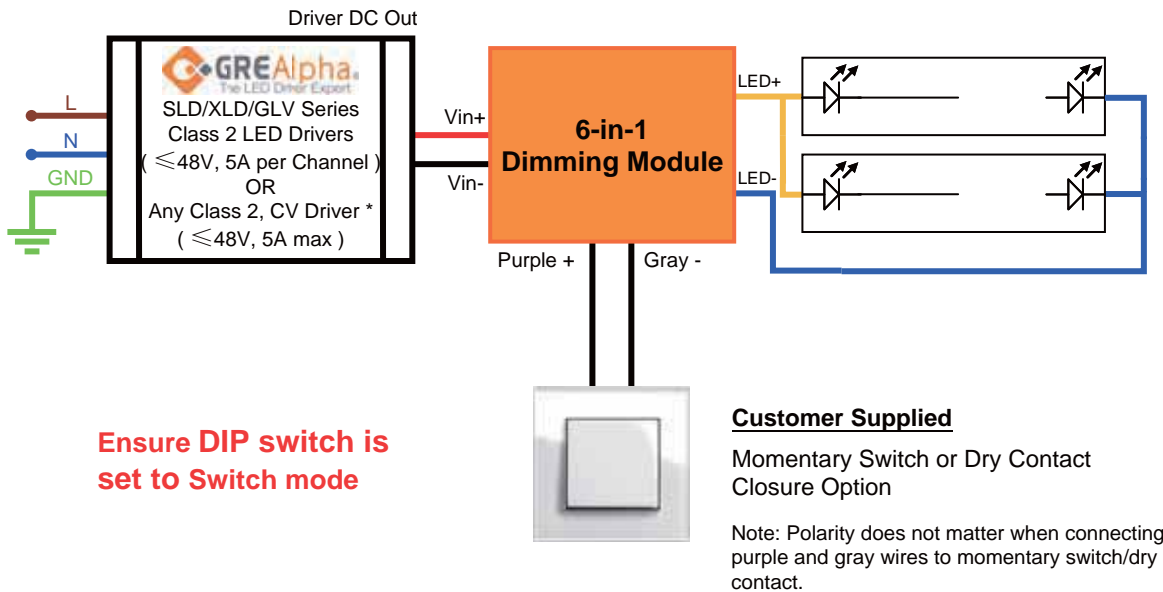


\*\* Note alternate simple on-off operation:  
 - Connecting the Purple and Grey output together will provide 0% brightness.  
 - Leave Purple and Grey output open will provide 100% brightness.

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**VR**

DIP switch is set to Switch mode



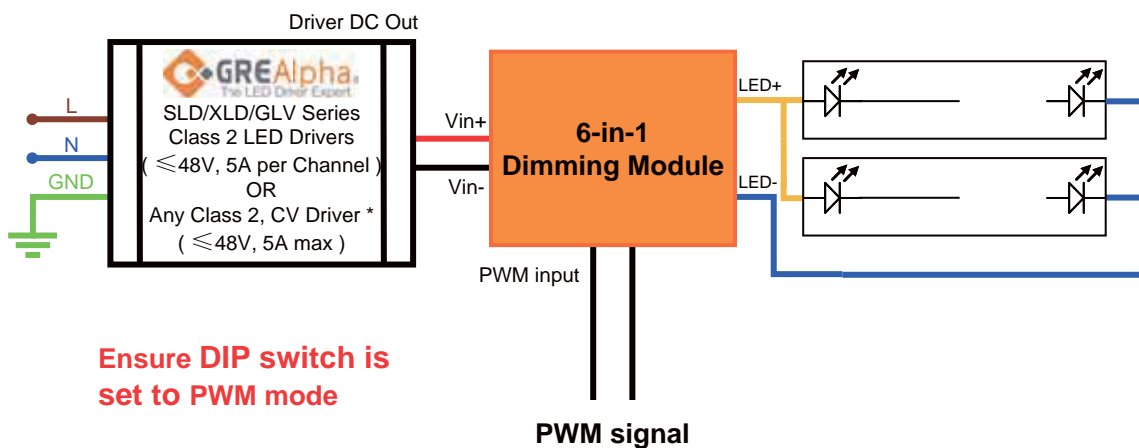
\*\* Note alternate simple on-off operation:

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

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### Switch Dim

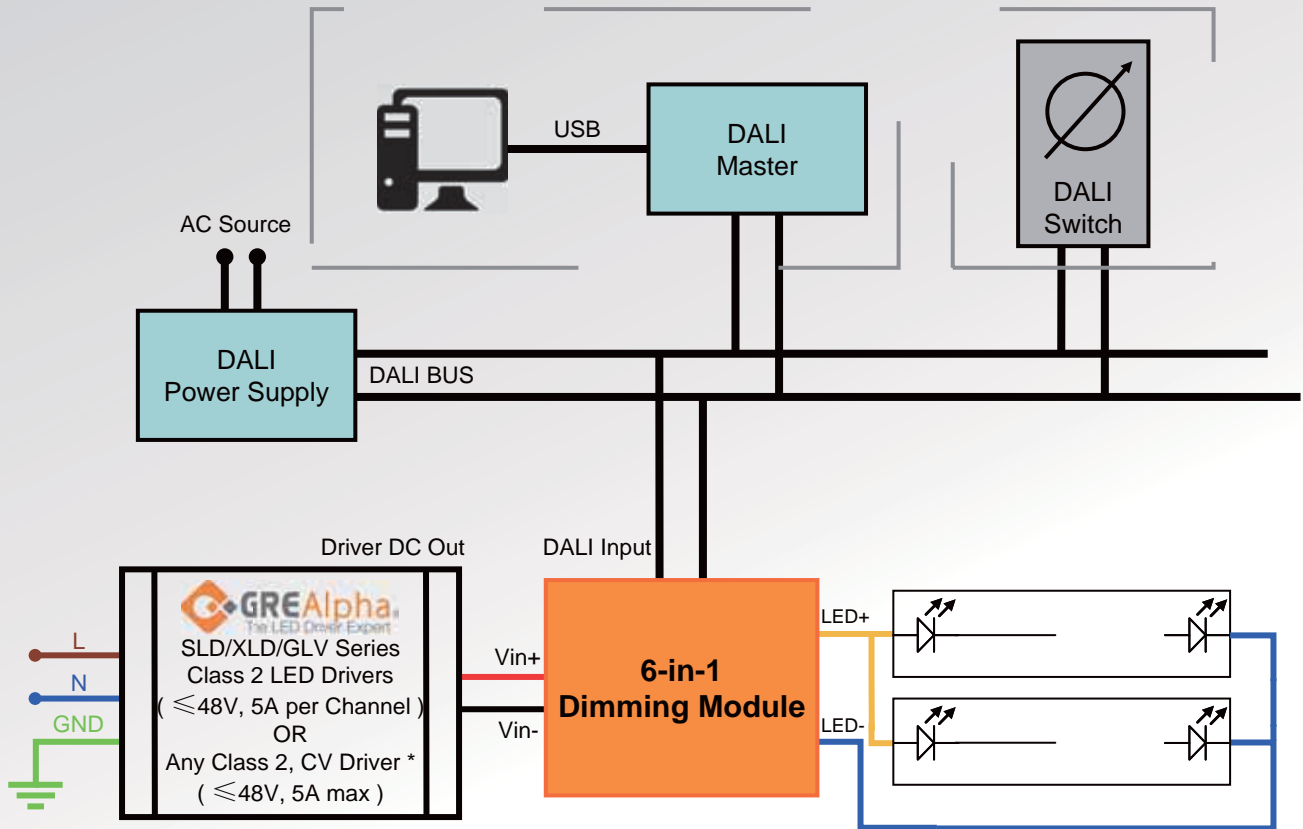
DIP switch is set to PWM mode



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### PWM

DIP switch is set to DALI mode



**Ensure DIP switch is set to DALI mode**

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**DALI**

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